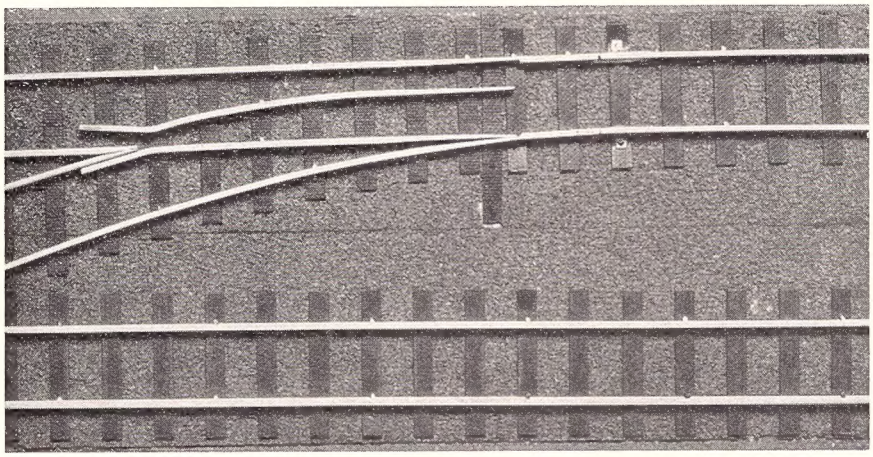
RAILWAY MODELLER

For The Average Enthusiast

VOL 8 1957 2/- FEBRUARY

Convert DUBLO or TRI-ANG to BEATITRAK



Change your Dublo or Tri-ang track to this fine spiked track. You lay it yourself on softboard and you get the finest type of permanent way at low cost. We allow an extra 10 per cent bonus on Beatitrak conversions.

2-rail track kit, yard	4/–
2-rail point kit, each	7/6
3-rail track kit, yard	5/6
3-rail point kit, each	8/6
Beatijoiners, packet ...	1/11
Beatispikes	2/5
Beatikork sheet, 18in. x 12in.	1/6
Beatikork strip, 48in. x 1¾in.	9d.
Super point lever ...	2/5
Beaticontrol set ...	1/–

or WRENN

	2-rail	3-rail
Track, per yard	4/8	6/2
Points, 15in.	9/4	11/–
„ 24in.*	10/6	12/3
„ 36in.*	11/–	12/10
* available curved at same price		
Switch diamond	11/8	13/7
Crossover	25/8	28/7
Double junction	36/4	39/11
Terminal rail	1/11	2/1
Uncoupler rail	3/6	3/6

ACCESSORIES

Fishplates, packet	4/3
Screws, ¼in. or ⅜in., gross	2/6
Point levers, $\frac{3}{16}$in. throw	1/9
„ „ ⅛in. „	1/9
Ballast (two strips)	1/10
Trees, three types, each	1/–
Baseboard frame, 5ft. x 3ft., each ...	27/6
„ „ 6ft. x 4ft., each ...	35/–
Wrenn track sets, 2-rail	27/6
„ „ „ 3-rail	35/–

Note : BEATITRAK must be laid on insulation board, which we can supply cut to size. All Wrenn accessories will match with BEATITRAK.

SUPER POINT LEVER
Universal throw. **2/5**
(post 4d.)

This is the lever for all point work requiring 3/16in. throw. It is realistic, neat, strong and positive. Note how the lever lies flat like its prototype! It costs a little more than an ordinary lever but you get the results you want!

WE STOCK AND RECOMMEND THE NEW EXLEY SUPER COACH KITS, ALL K'S WAGON AND VAN KITS, S & B LOADS, ETC., THE FULL BILTEEZI RANGE, ALL TRI-ANG AND TRIX SPARES

Terms : C.W.O. or C.O.D. (2/- extra)
Postage : under 10/-, 1/- ; under 20/-, 1/6 ; under 40/-, 2/- ; over 40/-, free.

BEATIKORK
sheets, 18 x 12, rubber bonded. **1/6** (post 6d.)

Now available in strips 48in. x 1¾in., this unique, rubber-bonded cork is unquestionably the best underlay for all types of track. It does not crack or crumble, it gives resilience to the track and it looks real good. You can lay Wrenn Ballast on top of Beatikork.

Send **4d.** for our new literature and latest conversion list with special postal bargain offers.

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MRA DEALER

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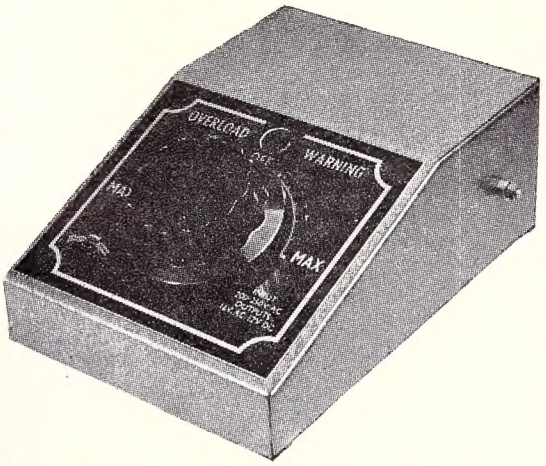
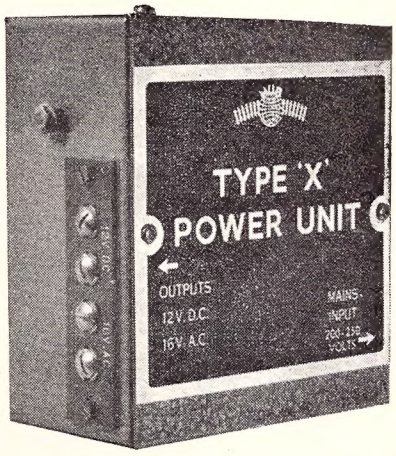
Power Unit with control

57/6 Post free
Trade inquiries
invited

- 16 volts A.C. for solenoid motors
- 12 volts D.C.
- Pulse power
- 1½ amps output



★ SUPERB FINISH ★ SUPERB QUALITY ★ SUPERB CONTROL



HUB X UNIT

Without control

39/6 Post free
Trade inquiries
invited

- 16 volts A.C. for solenoid motors
- 12 volts D.C.
- 1½ amps output

BE WISE - - - BUY HUB

Go NOW to your local model shop and see for yourself the famous HUB units. Only the finest materials are used; each unit is individually packed and carries full instructions.

HORNBY-DUBLO and MARKLIN FANS

NEW HORNBY-DUBLO TURNTABLE
Hand operated

45/-

SUITABLE FOR USE WITH YOUR MARKLIN LAYOUT

TAYLOR & McKENNA LTD.

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EARLY CLOSING THURSDAY **TELEPHONE ELGAR 3573**

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This'll make you whistle!

TRAIN CONTROLLER with WHISTLE and Automatic Safety Cut-out

This latest addition to the TRIX range has been specially designed for use with "OO" gauge locomotives operating on 4.5 to 12 volts D.C. (supplied from dry batteries, accumulators or a transformer/rectifier unit) and with a current consumption of not more than 0.5 amperes. It is complete with fully variable forward/reverse speed control, automatic safety cut-out with re-set button and operating train whistle simulator. It also incorporates new spring-loaded terminals for speedy connection to the track leads. Price **29/6.**

Ask your stockist for a demonstration, today!

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*THE NEW FLEXIBLE TRACK WITH HEAVY SECTION RAIL * AND SCALE SIZE SLEEPERS*

OO Gauge

The universal track for Dublo, Trix, Tri-ang, Marklin, Rivarossi, B.R.M.S.B.

	2-rail	3-rail
Gem "Flexi-Trak," 3ft. lengths	4/9	6/3
Universal turnouts :		
2ft. radius, L.H. and R.H.	10/10	12/8
3ft. radius, L.H. and R.H.	13/3	15/–
Turnouts on curve :		
36in.—24in. radius, L.H. and R.H. ...	13/3	15/–
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Fishplates, per 3 dozen, **2/5**
Track spikes, per packet, **7½d.**

(Postage on track 2/- any quantity.)

Read the Flexi-Trak Handbook "Track Laying and Wiring Simply Explained." Price **1/-** post free.

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T.T. GAUGE UNIVERSAL FLEXIBLE TRACK & POINTWORK

(as demonstrated at the Model Railway Hobby Show)

IS NOW IN PRODUCTION

Nickel silver rail on black fibre scale sleepers. Track will be supplied in 18-inch straight lengths curvable to any desired radius.

Details and prices will be announced shortly.

Send s.a.e. for descriptive leaflet to be sent as soon as published

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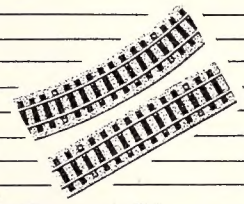
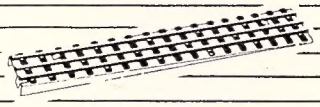
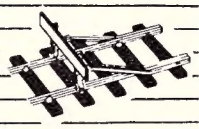




Right away!

Introduce Wrenn Universal Trackwork into your layout without further delay. It is designed to allow ALL types of locomotives to be mixed and run together. Its accuracy, smoothness of operation and realistic construction are guaranteed to give you years of reliable service.

The Wrenn range caters for all types of modeller, including the beginner with a new track set to the enthusiast with a double junction or the conversion-minded needing adaptor ramps and track.

Products designed and produced by the specialists, G. & R. WRENN, the originators of Wrenn Universal Trackwork and metal-chaired Flexible Track.

Universal Double Junction, Universal Straight Points, Universal Switch Crossings, Universal Curved Points, Universal Crossover, Unbreakable Trees, Terminal Rails, Ballast Strip, Adaptor Ramps, Point Levers, Fish Plates, Track Screws, Buffer Stops.

START RIGHT AWAY with a

BASEBOARD FRAME KIT

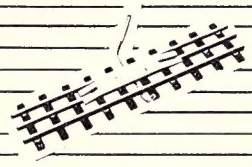
5ft. x 3ft. 27/6 6ft. x 4ft. 35/-

Five hardwood members, jointed, ready to assemble with screws provided. Easily made up in a few minutes.

IDEAL FOR HORNBY-DUBLO, TRIX, TRI-ANG, MARKLIN, RIVAROSSI, ETC.

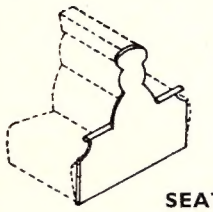
FOR FULL DETAILS see your Retailer or send a 1/- postal order direct for sample of Track and Literature or 4d. in stamps for Literature only.

G. & R. WRENN
HONYWOOD ROAD
BASILDON
ESSEX



Comfort for Passengers

CCW provide de luxe Accessories for Modellers



SEAT ENDS

An additional refinement for the connoisseur. Attractive castings easily fixed.

	"OO"	"O"
Set of 14	1/6	2/6

ARM RESTS

Per dozen	1/-	1/6
Per 3 dozen	2/6	4/-

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CCW offer these in 12-inch lengths that are readily cut to the sizes required.

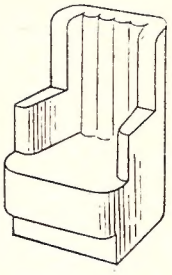
	"OO"	"O"
Single, per foot	1/-	1/6
Double, per foot	1/6	3/-

Special FLOCK

This most attractive interior finish for seats and carpeting, in Brown, Grey, Green, Rust, Royal Blue and Light Blue, per packet 1/- (post 3d.). Special adhesive, per jar 1/6 (post 6d.).

ILLUSTRATED 40p. CATALOGUE

For full information about the CCW range of kits for coach and van construction and accessories for "OO," "HO" and "O" gauges please send 1/- (post free); "Scaloh" "O" gauge supplement 6d. (post free). Catalogues free to overseas.



FIRST CLASS CHAIRS for Pullmans

When rubbed down and flocked these chairs are most realistic and at such moderate prices add so much to a model.

"OO" Ref. PCH	3/6 per dozen
"O" Ref. PC	5/6 per dozen

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"OO" Ref. DCH	3/- per dozen
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CCW

CCW PRODUCTIONS

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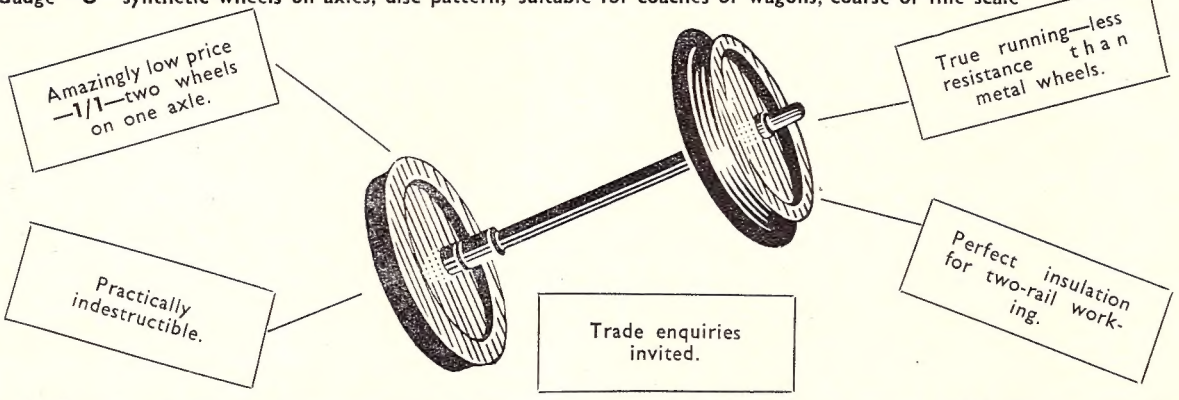
BASSETT-LOWKE ANNOUNCEMENT FOR ALL GAUGE "O" ENTHUSIASTS

They're News - They're New

Gauge "O" synthetic wheels on axles, disc pattern, suitable for coaches or wagons, coarse or fine scale


Amazingly low price —1/1—two wheels on one axle.
True running—less resistance than metal wheels.
Practically indestructible.
Trade enquiries invited.
Perfect insulation for two-rail working.

These new wheels are made of a tough, non-brittle synthetic and are pressure formed in moulds of the highest accuracy. They are true running, offer less resistance than metal wheels and are practically indestructible. They offer perfect insulation for two-rail working and are recommended for use on all types of layouts. Coarse scale (27mm. back to back) or B.R.M.S.B. fine scale at the amazingly low price of 1/1 for two wheels on one axle.

Obtainable from Bassett-Lowke Branches or direct from our Northampton address

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London showrooms : 112 High Holborn, W.C.1 **Manchester showrooms : 28 Corporation Street, 4**

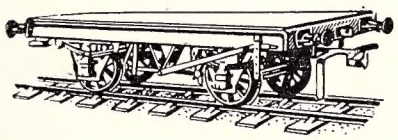
Prompt and experienced service for both postal and personal customers

DO IT YOURSELF *with* PECO

Build your own goods wagons with the* PECO CHASSIS AND UNDERFRAME *Kits!

"00" Gauge

Did you know that the Peco Chassis Kit provides you with all that you need to mount any **16ft.** (64mm.) long wagon body on the identical chassis used in the famous Peco Wonderful Wagons for only **6/3** ? Or that for **4/6** the Peco Underframe Kit supplies fully sprung undergear for any special wagon, comprising true-scale axleguards with axleboxes fitted with working springs and brass bearings, a super-detailed pair of buffer beams incorporating sprung buffers and the Peco-Simplex Auto-coupler, together with accurate breakgear and lever for 9ft. or 10ft. wheelbase ? Fit your next wagon with a super-detail true-scale underframe—it actually costs less !



Both kits are suitable for super-detail "EM" gauge wagons as every part is to scale (Chassis Kit—wheels need conversion)

UNDERFRAME KIT only **4/6**
less wheels and floor

CHASSIS KIT only **6/3**
complete 9ft. w.b.

FROM YOUR LOCAL PECO DEALER

or in case of difficulty

THE PRITCHARD PATENT PRODUCT CO. LTD.
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UNIVERSAL SPIKED TRACK KITS

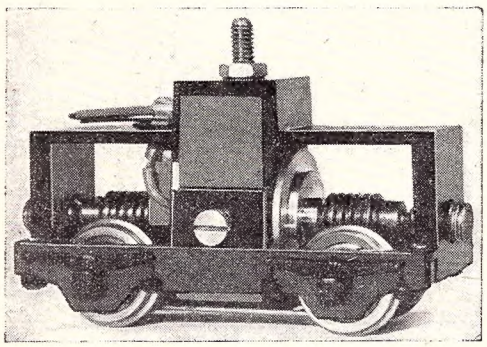
Do it yourself and save money with these simple, easy-to-assemble Peco Spiked Track Packs. Each pack contains all you need to make one yard of track or one R.H. or L.H. universal point.

TRACK PACKS (1 yard) ... **4/-** 2-rail **5/6** 3-rail
POINT PACKS **7/6** 2-rail **8/6** 3-rail

NOW AVAILABLE

ROMFORD MOTOR BOGIE

("OO" GAUGE)



A precision unit for electric motor coaches incorporating our well-known "Flywheel Drive."

Screw assembly throughout with accurately balanced flywheel and power transmission to all wheels.

For 16.5mm. or 18mm. gauge, two- or three-rail outside collector, or three-rail centre collector for Hornby-Dublo.

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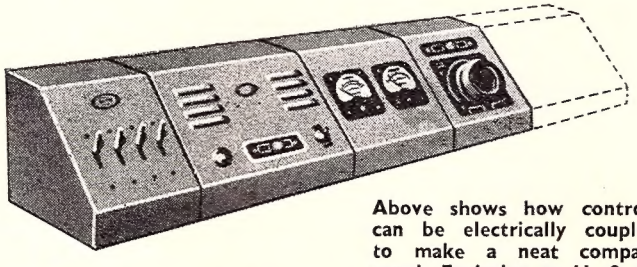
Whatever your motor—

and whatever your system



Above shows how controls can be electrically coupled to make a neat compact panel. Exclusive to H. & M.

The latest H AND M CONTROL EQUIPMENT will provide finest performance

BUILT BY SPECIALISTS FOR DISCRIMINATING ENTHUSIASTS.

As leaders in this specialised field, our designers are continually seeking new and improved devices to increase the scope of the enthusiast.

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MODEL ENGINEERING TRADE ASSOCIATION MEIA

RAILWAY MODELLER

Specializing in Small-scale Railway Modelling

The Lobby

IT is not our usual practice to print letters of praise received from readers, as we feel that blowing one's own trumpet in this fashion is rather ostentatious; but this is a special occasion, for the favourable response to the new RAILWAY MODELLER has been so overwhelming that we feel justified in breaking, for once, this self-imposed rule.

"We wish to congratulate you on your enlarged and improved magazine. It is the first British magazine to measure up in any way to the page size of the American contemporaries" is a typical example of the letters we have received. Another reads: "We are interested to see the January issue of the RAILWAY MODELLER in its well-proportioned larger size. Excellent advantage has been taken of the three-column setting for orderly, attractive layout." Many readers were quick to see the advantage of the larger page. "The larger size is certainly an asset as regards the drawings and photos." "I like the new size of the magazine, as it gives so much more scope for illustrations and also contains more copy. . . . I would hate to miss a copy." "May I say how pleased I was to see the new larger sized RAILWAY MODELLER? Your magazine is now really tops. I like the full-sized 4mm. drawings of locomotives and look forward to Sir Eric Hutchison's drawings. Keep up the good work." "The new size of the magazine is an improvement." "The RAILWAY MODELLER certainly looks very impressive in its new style, and obviously, with the broadened facilities the new page size offers, your magazine will become quite significant in the model railway field." "Certainly this larger size does lend itself to more attractive illustrations editorially, and this all helps more detail in the pictures." "Many congratulations on the new R.M. This is indeed 'some' improvement." "Congratulations on the new RAILWAY MODELLER, which is very impressive." These and many other similar letters have formed the major portion of our postbag since January 1.

As a typical example of the many compliments paid to us by our advertising friends, a leading agency wrote: "We are extremely pleased to see the RAILWAY MODELLER in its 'new look' and would like to extend our congratulations to your company on producing such a fine magazine for the model railway enthusiast.

"With the ever-increasing spiral of production costs and inevitable increases to the consumer, it is always a pleasant change to see a genuine attempt at least to give value for money, and there can be no doubt that you have accomplished this very successfully in your new format."

Coming as this does from people qualified to judge such matters impartially, we find this highly gratifying.

We did not, of course, expect to please everyone, but the few complaints received centred around the old bogy that always crops up when a magazine changes format, that of bookshelf space. We do, however, feel that on reflection those who have made this point will realize that this should not stand in the way of progress. It is not that the new size is out of keeping, as the majority of class magazines are of similar proportions, but rather that the old size was too small.

So, encouraged, we pledge ourselves to still further improvement.

May we remind readers that we shall in a short time be sending this year's batch of sets of loose parts to the bookbinders? The cost is modest indeed, only 10/-. Full details are to be found on page xii of the December issue.

CONTENTS Vol. 8, No. 76

RAILWAY OF THE MONTH
Zurich's Unique Model Railway 26

DO IT YOURSELF
An Ultra-miniature Model Railway 29
The Story of Two "Bulldogs" 30
Some Dublo Modifications 37
Trent Dockside Reconstructed 32
A Railway in the Lounge 34
Farm Fare 40
A Veteran Returns 40

PROTOTYPE
Ex-G.N.S.R. Six-wheeled Passenger Brake 33
B.R. Standard Pacifics ... 36
The Snape Branch 39

JUNIOR MODELLER
A Fine Junior Layout ... 44
Milk Vans and Tanks ... 45
Build a Water Crane ... 45
Hornby-Dublo Long-wheelbase Wagons 45

REGULAR FEATURES
Layouts for the Modeller ... 38
Book Reviews 38
Peco Topics 41
Readers' Letters 42
Advice Bureau 43
Personality Parade 46
Club Notice Board 46
Trade Window 47

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PECOWAY : STATION ROAD
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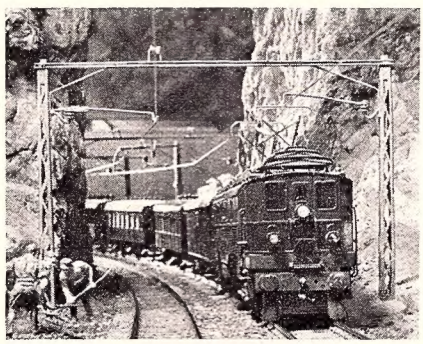


COVER PICTURE

It is not often that we have to look twice at a photo before deciding whether it is model or prototype, but this shot of the fine exhibition layout at Zurich certainly had us guessing.

This periodical is sold subject to the following conditions:

That it shall not without the written consent of the publishers be lent, resold, hired out, or otherwise disposed of by way of trade, except at the full retail price of 2/-, and that it shall not be lent, resold, hired out, or otherwise disposed of in mutilated condition, or in any unauthorized cover by way of trade, or affixed to as part of any publication or advertising, literary or pictorial matter whatsoever.

Railway of the Month

ZURICH'S UNIQUE MODEL RAILWAY

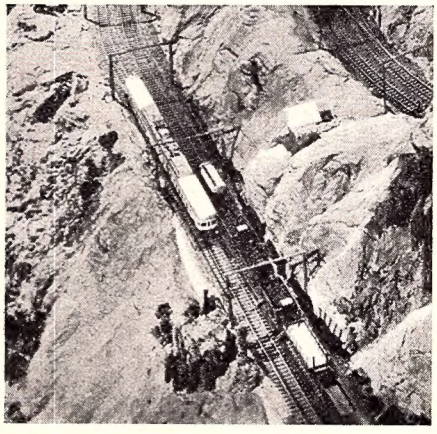
by Jean Meyer

A scenic railway, using "O" and "HO" tracks to give true perspective, that sets a standard of modelling that is hard to beat.

TRAVELLERS and tourists visiting Zürich have for the last few years been able to see in miniature some of the most famous parts of the Bernese Oberland, with all the railroads, funiculars and mountain railroads in that part of Switzerland. This perfect scale model is situated adjacent to the Zoo, and is housed in its own special building, which occupies an area of 9,000 square feet.

As one enters, on either side are realistic models of the Bern-Lötschberg-Simplon and Rhätischen locomotives, displayed in well-lit show cases. One is now underneath the actual construction of the scenic railroad. Then, as one walks farther and glances upwards, one sees through cut-out sections in the ceiling some of the breath-taking mountains, with their jagged peaks and their ravines spanned by strongly built steel bridges. One may even see the freight and passenger trains moving swiftly over them. The visitor feels lost in the depths, dwarfed by what he glimpses, and must force himself back to reality and hurry up the last few steps. Then suddenly he is in the most glorious mountain scenery. Everything is there, in miniature, down to the last detail. Rocks, trees, Alpine huts, tiny villages, churches and, naturally the most important, the shining railroad lines.

The railway from above.



They lead along the slopes, over bridges and through tunnels, and meet in an apparent chaos of rails at the stations. Along them travel the different trains, which may climb at one moment and the next disappear into a tunnel, to reappear later at some other point.

The trains observe the light signals—stopping when there is a red light and continuing as it changes to green. There is a perfect little lake on which one notices a steamer, which appears to be driven from port to port by a ghostly captain.

The visitor may sit comfortably and watch all the proceedings from a large terrace which overlooks the whole layout, one of the largest and most beautiful in the world, and with a little imagination he can really feel he is on the top of a mountain. On the right hand in the background is the picturesque Interlaken—Heimwehfluh mountain railroad. Farther along on a very steep gradient the little locomotive of the Schynige-Platte railroad is pushing its single carriage upwards. Even the world-famous Berg-Bahn leading to the Jungfrau mountain is there. The Wengen-Männlichen funicular, opened a year ago, is also to be seen. Just as in reality, the gay little coaches are hovering in mid-air over the mountain slopes.

One may see, too, the spectacular changes of light in this mountain world. As dusk falls over the inspiring mountain setting the white peaks slowly turn crimson and then darken. The sound of distant church bells floats upwards and slowly the lights appear as darkness comes—all the railroads shining and the stations glowing in the night. Then one hears an alphorn playing. But the night is short in this miniature world and the visitors can experience for themselves the rosy dawn appearing in the Alps.

During the winter months a coloured film is shown on a screen behind the scenery, depicting the inspiring trip into the Jungfrau group of mountains and finally up to the Jungfrau Joch. Perhaps you wonder where lies the secret that enables one man to control all this.

Well, a loudspeaker gives the answers in French, German and English, and tells one that the construction is in wood covered with hessian, moulded with cement in order to produce the exact mountain formations of the Bernese Oberland. To this are added seven tons of real mountain rocks to make the mountains completely realistic. The whole length of the railroad is 1,266 feet, of which 810 feet are carried out in "O" gauge. This part is an exact facsimile of the Swiss railroad pattern. It is split up into twenty-four sections, which can be blocked, thus allowing full automatic travelling of the trains. Accidents or collisions are impossible. When the block sections are free, a green light signal shows; as soon as a train passes this signal turns to red and the following train is automatically halted until the section is free again.

A special attraction for visitors is the modern signal-box, from which everything can be controlled. A central switchboard with 130 relays guides all the railroad traffic; 200 wires spread out to the points, the signals and the overhead electric cables. For this very complex arrangement about 100,000 feet of insulated wire is used. The electricity for the locomotives is taken from the overhead wires, which need 320 masts to keep them in position. Again they are perfect replicas. For the track laying and points 20,000 wooden sleepers are used.

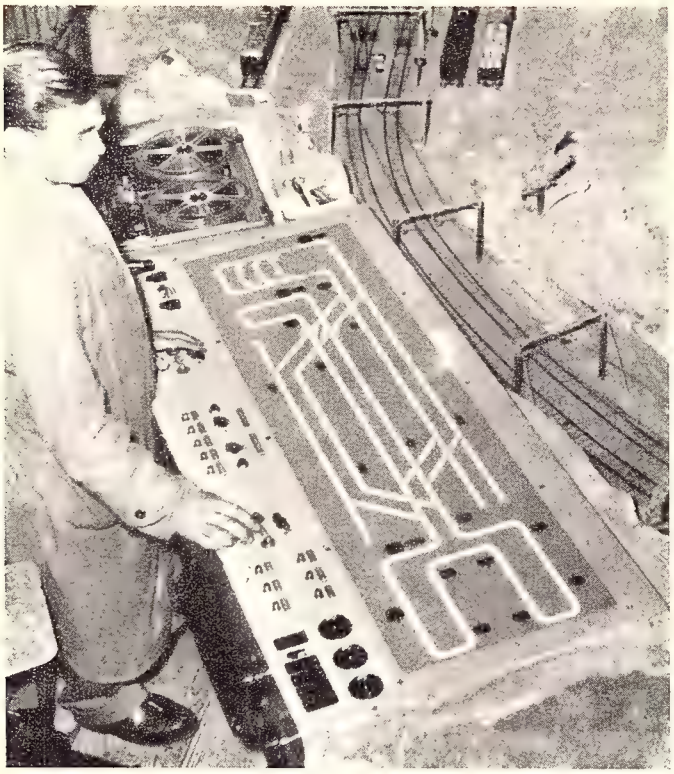
As an example it may be mentioned that on the "HO" section there is an exact reproduction of the fast-travelling single-carriage engines from the Bernese Oberland in a scale of 1 : 90. An electric motor the size of a thimble is used for driving the four axles, running on ball bearings.

The builder of all this is a professional train driver on the Swiss railroads. For him and his co-workers and the manager of the concern, which is still being added to, it was not merely a commercial project, but a combination of idealism and pleasure.

If one considers the figures and precision with which it was all built one may also realize the enormous amount of work which lies behind the project.

Anyone who visits Zürich should not miss the opportunity of seeing this spectacular work, as it is certain that much pleasure will be found in doing so.

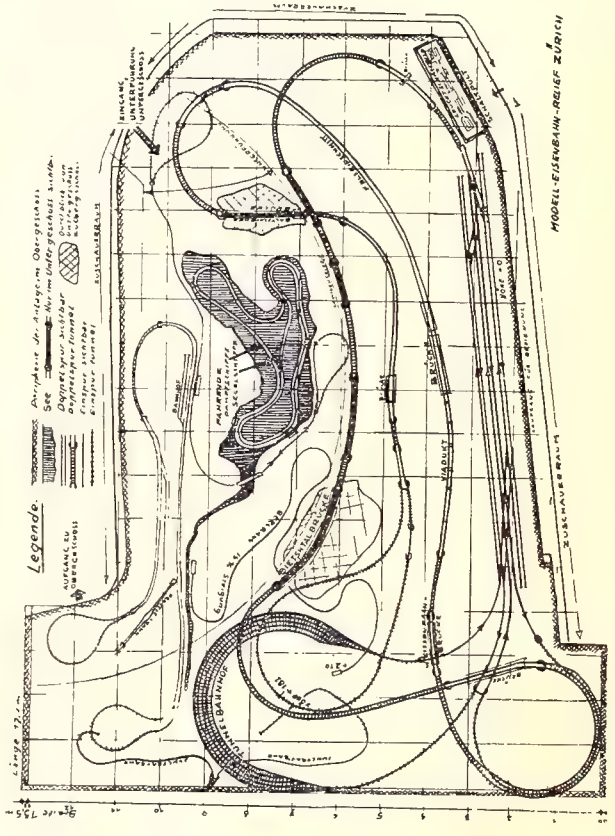
The twin-car electric "Blue Arrow" crosses a scale model of Baltschied viaduct. The mountain scene behind adds to the grandeur of this view.



The control panel.

A busy scene in the main station.

General view from the visitors' gallery.

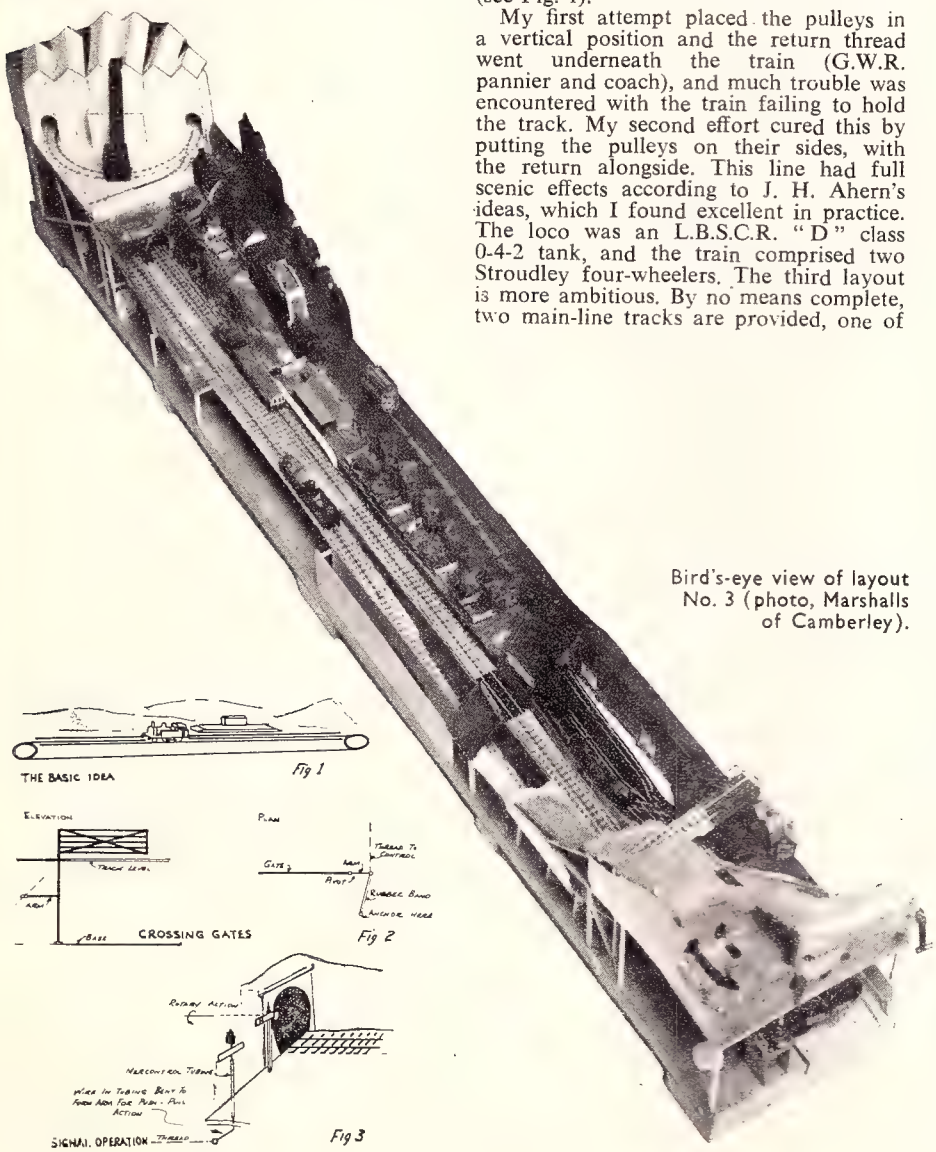


AN ULTRA-MINIATURE WORKING RAILWAY

by A. J. Pike

THIS effort was not originally intended to beat the space bogy, but to my mind has succeeded in doing so. Most modellers will be familiar with the products of Micromodels Ltd., whose miniature card mock-ups are to a scale of 1.5mm. to the foot. Having assembled pretty well all their locomotives, and designed and built some myself, reaching the total of 113 locomotives, I wondered if there was not some way of mobilizing them. I remembered the old cable railway in a Meccano manual, and carried out several experiments. The basic idea is a perfectly straight, flat track, with a pulley at each end. A thread is fixed round the pulleys and a locomotive is attached thereto. It will be seen that by turning the pulley the engine will move up and down (see Fig. 1).

My first attempt placed the pulleys in a vertical position and the return thread went underneath the train (G.W.R. pannier and coach), and much trouble was encountered with the train failing to hold the track. My second effort cured this by putting the pulleys on their sides, with the return alongside. This line had full scenic effects according to J. H. Ahern's ideas, which I found excellent in practice. The loco was an L.B.S.C.R. "D" class 0-4-2 tank, and the train comprised two Stroudley four-wheelers. The third layout is more ambitious. By no means complete, two main-line tracks are provided, one of which is worked by an L.N.W.R. "Chopper" 2-4-0 tank (a cut-down Micromodels "Precursor") and a short brake-third. These lines have a tunnel at each end of the track, to make some semblance of continuity. The other line is goods, and a freight train is headed by a free-lance 0-6-0 saddle-tank lettered B.C.R. This is intended for Bedlington Colliery Railway, and fits some Bishops Castle Railway stock! Not all the goods train will move (for it has yet to be installed), for a reason which will be apparent later. In the street outside the station a tramcar operates.



Bird's-eye view of layout No. 3 (photo, Marshalls of Camberley).

Fig 1

Fig 2

Fig 3

In the foreground of the photograph of this layout a quarry can be seen. This is to narrow gauge, and a de Winton 0-4-0 vertical-boiler tank is set there to grace the landscape. I have another of these tiny engines, and their size may be judged from the fact that they would both stand on my thumbnail. The quarry is connected by an incline to the station at the foot of the hill, where a Festiniog train, headed by "Little Giant" (again dummy) can be seen. The incline works, and the large handle at the right raises or lowers the four slate wagons thereon.

Just beyond the station the standard gauge is crossed on the level by a road. The gates operate, as shown in Fig. 2.

At the far end the tracks disappear beneath a factory, as yet unpainted. The circular track in its precincts so far holds nothing, and I am thinking of totally rebuilding the whole end. Reverting to the main lines, each has a signal at the entrance to the tunnels. The right-hand signal is a normal lower quadrant, worked on a principle that I lifted from an article in the *Model Railway News* many years ago—a product of some genius in the Ilford Model Railway Club. The signal on the left is lost in the photograph, but is a crossbar type, with a lamp on the top. The post is a piece of Mercontrol tubing, and the whole thing is shown in Fig. 3.

It will be seen that the subterranean arms of the level crossing will pass right through the freight train on the colliery line; for this reason the train must be stationary.

The track is formed from the cards put out by Modelcraft Ltd., and the sole snag to this type of operation is that the wheels and coupling rods cannot turn. However, in so small a scale I am prepared to turn a blind eye to this, and to say to the no-room-for-a-layout fraternity: "If you haven't room for a layout 3ft. 9½in. by 6in., then either you live in a phone box or else you're just not trying!"

THE STORY OF TWO "BULLDOGS"

by A. S. Taylor

Drawings by Eric Longbottom

Being the detailed description of the construction of a super-detailed prize-winning pair of 4mm. scale models.

(continued from page 8 January issue)

THE CAB

The cab was now soldered to the footplate and the vertical handrails were added. These were let into No. 70 holes in the footplate and soldered from underneath. The top went under the bead.

Wherever I have referred to the operation of sweating, we have employed Fryolux solder paint. This is an excellent preparation combining solder and flux and can be applied to the parts with a small paint-brush. Thereafter, by simply bringing a hot iron into contact with these parts a joint is made, and one requiring little cleaning up. It is, of course, used for those items requiring sweating rather than, say, platework at 90°, where a fillet of solder is needed for strength. No corrosive action has ever manifested itself.

(e) Splashers, Sand-boxes and Springs

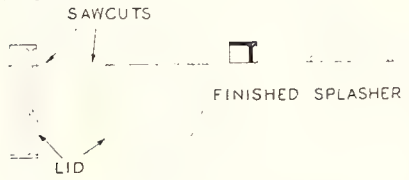


Fig. 9. Splashers.

(i) *The splashers* were formed by turning small hollow lids from one-inch brass bar, with a small rim left on the face of each to represent the edge bead of the splasher itself. They were then cut into segments of the required depth, resulting in a solid splasher that cannot come apart during the process of soldering to the frame. As the model was built to 16.5mm. gauge, it was necessary slightly to increase the width of the splasher top to bring it out to the correct position on the footplate.

Before fixing the splashers, a light guide line was drawn along the frame with dividers, giving an accurate and visible position for soldering the fittings into place.

(ii) *The sand-boxes* were made from brass bar milled to shape in the lathe, the curved surface being accomplished with the aid of an adjustable fly cutter set to the radius of the splasher. The sand-box lids were turned to sufficient length for them to penetrate a hole drilled in the body of the box passing right through the footplate and being soldered underneath it, avoiding the difficulty of soldering the solid brass boxes. The tops of the boxes were formed from nickel-silver strip and were sweated to them with Fryolux before the units were attached to the main frame.

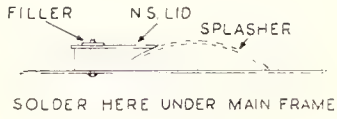


Fig. 10. Sandboxes.

(iii) *The springs* were amended to suit from Beeson castings. They were drilled underneath the holding brackets and brass was force fitted into these holes to form the uprights. The centre wire immediately below the central clamp was passed through a No. 70 hole in the footplate and soldered beneath, giving a firm fixing without detriment to the castings.

THE FIREBOX

As will be generally realized, a Belpaire firebox is not an easy item to render accurately, since it tapers towards the cab both at the top and along the sides. The first task, then, was to construct the jig that was to form the basic firebox structure, around which a wrapper would be shaped and later secured.

The jig consists of front and rear plates and a spacing rod of ¼in.-diameter brass. The two plates were marked out from the blueprint, using the dividers as a compass for the corner and side radii. The plates were marked to allow for the thickness of the wrapper, while the front plate was made of 1/16in. brass to allow for rounding and shaping.

We now come to the more tricky operation of bending the wrapper to fit our former. A strip of .010in. nickel-silver was cut, having a width equal to the overall length of the firebox plus ¼in., that is allowing for an overlap of ⅛in. on either side. This strip was about 6in. in length, allowing us plenty of metal for leverage during the bending process. To the best of my knowledge there is no magic formula for firebox shaping—rather it is a question of trial and error, taking care each bend is not too positive until it is in the right spot. We used various sizes of silver steel rod held in the vice to obtain these bends, starting with the lower one on one side and continuously testing on the jig.

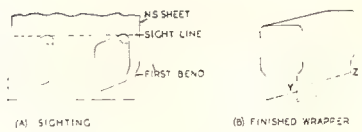


Fig. 12. Bending the wrapper.

Having achieved the first lower bend, which, of course, is the easiest to form, the wrapper can be held in the position dictated by it, and a sighting line scribed on the inside of the metal at the approximate centres of the top bend. The wrapper is now removed and a trial bend made at the scribed sighting line. As soon as this has been correctly obtained pass on round the firebox, using the same procedure in each instance. Care must be taken to ensure that each bend is a full one and that the finished wrapper is a fit and does not spring outwards, since this would put a very considerable strain on soldered joints.

The wrapper was now strongly soldered in its correct position on the firebox jig, all joints being made on the inside edges, and it only remained to cut away the surplus metal at each end and along the bottom (YZ). The unit was then carefully filed to shape and rounded as necessary on to the front plate. We were now left with a strong (and I hope correctly shaped!) fire-box from which the spacer could safely be removed.

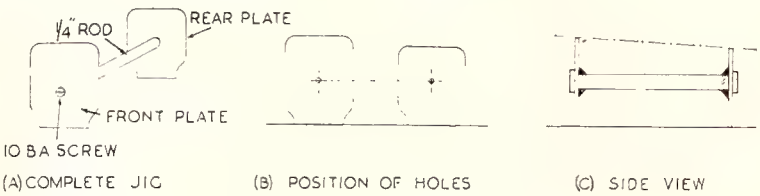


Fig. 11. The firebox jig.

The two boiler bands were sweated in position, these being cut from .005in. nickel-strip and the staybolt covers added. No action was taken at this stage, however, towards the fitting of either the washout plugs or the handrail knobs.

THE CONE BOILER

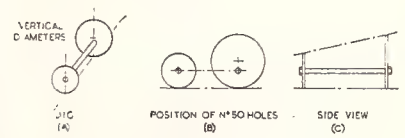


Fig. 13. The boiler jig.

Here is another none-too-easy boiler item, The G.W.R. boiler is not a true cone, the bottom positions lying parallel to the footplate and the top tapering toward the smokebox end. To deal with this unit a jig on similar lines to that used for the firebox was constructed. This again comprised three portions—two discs equal in diameter to the front and rear dimensions of the boilers, less, of course, twice the thickness of the metal forming the wrapper. This was once again .010in. nickel-silver.

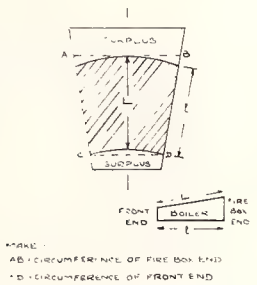
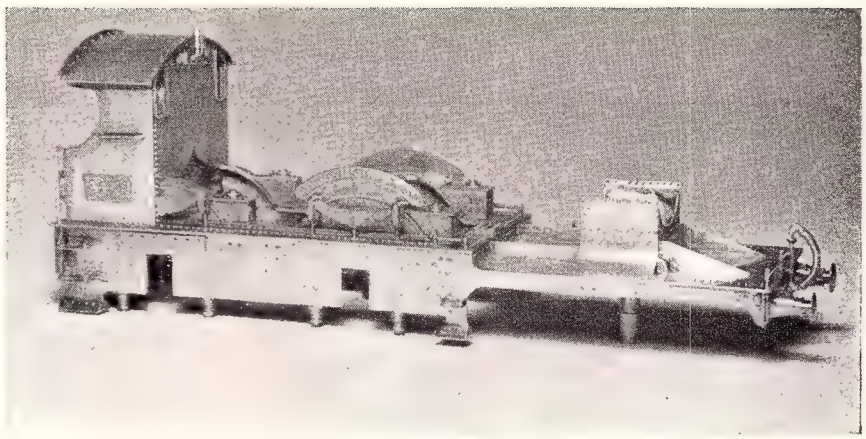


Fig. 14. Marking out boiler.

It is difficult to mark out accurately a flat plate which can be rolled to form the cone positions of the boilers, the theoretical shape required being the shaded portion. The more practical solution is to mark out the figure ABCD, leaving an overlap of $\frac{1}{8}$in. at each end. The surplus material is cut away after the cone has been formed and fitted to the jig. Having cut out the cone in the flat, it was rolled in circular form in a small rolling machine. Few people, however, possess a rolling machine, so that in general the boiler would have to be formed by continuous kneading and bending round a silver-steel rod. It might be necessary in this case to soften the nickel-silver. This can be achieved by heating the metal in a gas flame to a dull red colour and allowing it to cool slowly.

Having produced the cone wrapper, the jig was next inserted into the correct position from the rear end of the boiler, leaving an overhang at either end. Soldering took place, this time of necessity on the outside of the end discs, the solder being drawn well round. Thus we had our completed cone in its rough state. With a piercing saw, the surplus metal was carefully cut away and the ends of the boiler were turned up with files and emery paper. The two 10 B.A. bolts holding the spacer can of course be removed during this final cleaning up.



The footplate unit.

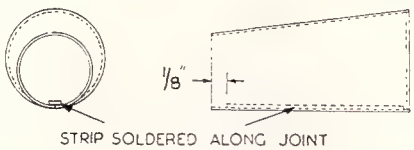


Fig. 15. Joining boiler barrel.

Having now produced a correctly shaped boiler, the first disc was carefully unsweated and removed. At the same time, of course, the spacer was taken away. At this stage the boiler was held solely by the rear plates. Along the bottom of the boiler, therefore, i.e. where the two edges meet, a small internal strip was soldered, taking care to keep the boiler in shape as soldering proceeded. This strip came to within about $\frac{1}{8}$in. of the front end. The object of this exercise is to effect a smooth union with the smokebox, as we shall shortly see, and we now turn to that particular item.

THE SMOKEBOX

As this is both a small and parallel tube no special former was necessary as with the firebox and cone boilers. Two discs were, however, turned to size (diameter of smokebox less twice the thickness of the outside covering once again), the first disc being of .015in. nickel-silver with a No. 50 hole at its centre, at the rear of $\frac{1}{8}$in. brass bored out to form a ring through which a soldering iron could later be passed. It should be noted that this ring is of the same diameter as the erstwhile front plate of the cone boiler. The wrapper was formed from .010in. nickel-silver, cut this time to accurate width and of length equal to the circumference of the smokebox. Rivets were duly positioned along the edges and the wrapper was rolled to shape. A small internal strip was soldered along the joint on the inside of the wrapper, leaving about $\frac{1}{8}$in. clear at either end. The front plate was next inserted and soldered from the inside, standing the cylinder on a flat piece of hardwood to ensure a level fit. Fryolux will be a help during this operation, as it can be "pasted" in position round the circle and additional solder added on the tip of the iron.

The rear ring was now soldered into the position shown, leaving a protrusion of about $\frac{1}{16}$in. This was, of course, to fit into the open end of the boiler. Before this union took place, however, the smokebox door was made and fitted from the inside, being soldered at the point X.

SMOKEBOX DOOR

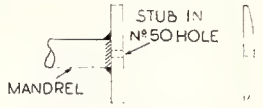
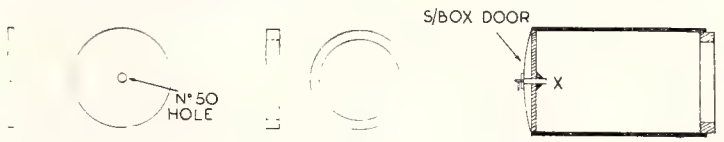


Fig. 17. Smokebox door.

This is quite a little unit on its own account and was constructed in this way.

A circle of slightly greater diameter than the finished door was scribed on a piece of $\frac{1}{8}$in. brass. This was centrally drilled No. 50 for 10 B.A. clearance, and then cut out. A small mandrel of brass with a stub equal to a No. 50 drill was now turned so that the rough blank could be push fitted on to it and would be hard against the mandrel. It was sweated at the back. The mandrel was now chucked and the blank turned to exact size. The "doming" of the front was accomplished with files as the disc spun round, thereafter being finished with emery paper.

(To be continued)



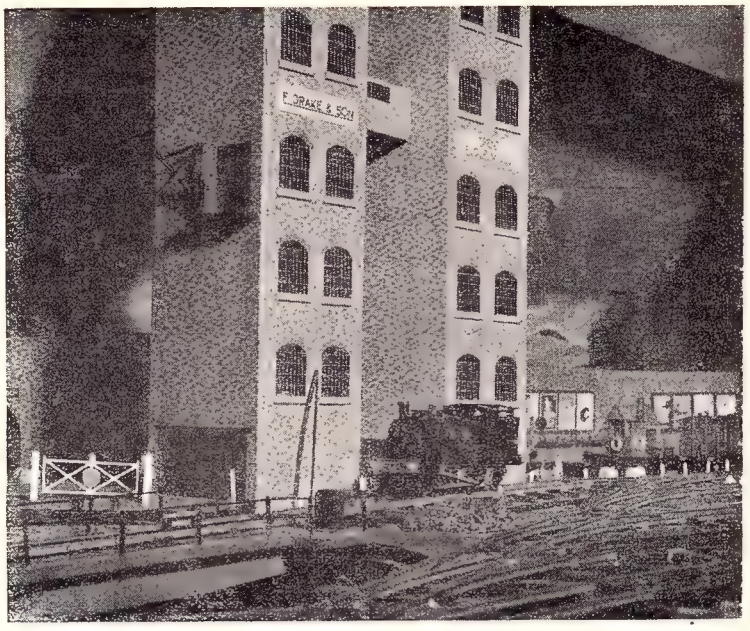
FRONT PLATE & REAR RING ARE THE SAME DIAMETER

Fig. 16. The smokebox drum.

TRENT DOCKSIDE RECONSTRUCTED

by N. S. Eagles

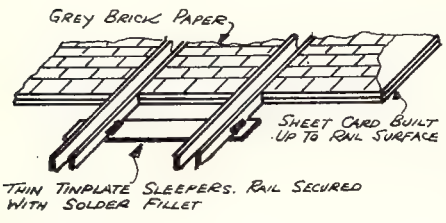
Photos by Philip J. Kelley



Trent from the signal-box. Ex-Caledonian 0-4-2 ST. No. 15001 standing outside the flour mills. This structure effectively disguises what would otherwise be a pair of obtrusive roof supports.

FOR some long time we had been dissatisfied with the track layout of the dockside at Port Trent. Admittedly it was not in continual use, there being only three arrivals and three departures during the twenty-four-hour circuit of the timetable, which meant an average of one and a half movements during each evening's operation; but the shunt involved was awkward to say the least, and some operators were not prone to say the least! The train engine off an arriving fish or oil empty would uncouple and proceed to shed, one of the shunting tanks would be coupled on and, owing to the restricted length of the shunting neck, the wagons had to be shunted two at a time and subsequently shunted back round the dock by an alleged capstan. The site is much restricted by three roof supports, two of which are effectively disguised as a flour mill and the third as a warehouse. After some discussion we agreed that the only alternative method of approach would be from the locomotive turntable by way of a very sharp curve. Provided that the rolling stock was restricted to four-wheeled wagons, and locomotives did not pass beyond the turntable (neither of these features lacks realism) we thought it might be done. We realized that there might be some criticism at shunting across the turntable, but felt that if we really looked hard enough for such a prototype arrangement we should probably find one, as over the years we seem to have found examples of all the things that the purist would have us believe do not exist.

Inset track.

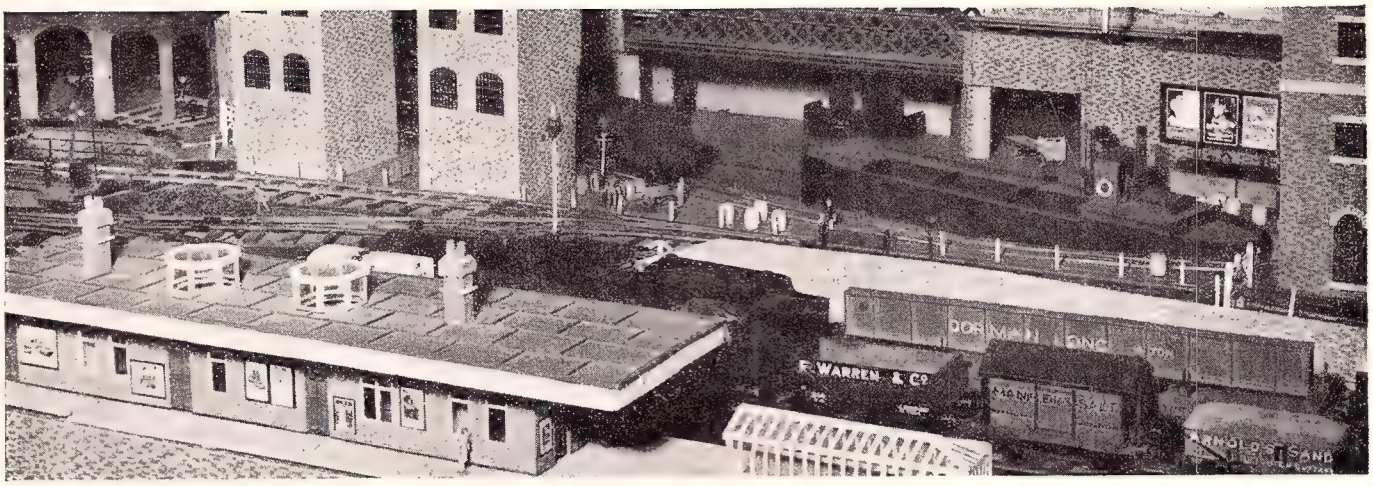


It was decided that the new track should be sunk in the roadway as is the normal practice. Rectangular strip brass $\frac{3}{32}$in. x $\frac{3}{64}$in. was used to construct the track; although the drawing shows $\frac{1}{8}$in. x $\frac{1}{16}$in. Either size would be quite suitable, but it is necessary to check that sufficient depth is allowed for the largest flanges in use on the line. Two running rails and two check rails were provided for the whole length of the dockside, each rail being soldered to sleepers made from thin tinplate and spaced at fairly wide intervals. The inner rails can be placed just a fraction less apart than the normal back-to-back measurement on the straight and on large-radius curves, and this will give a better appearance than if they are placed at the standard check-rail settings. The Port Trent line has an exceedingly sharp curve upon which the gauge was increased by $\frac{3}{32}$in., while the inner rails were placed $\frac{3}{32}$in. closer. This allows quite easy running of vans with a 9ft. wheelbase, and in fact the L.M.S. Fowler 2F 0-6-0 tank 7108 negotiates this 6in.-radius curve, although, since nobody expected that that would be possible, it was our intention to erect a "no engine to pass this board" sign in advance of the curve.

The whole length was carefully made to the exact shape to fit the available space. Thick card, a full 2mm. thick, was cut to the shape of the dockside and laid into place. The brass track was put in its position on top of the card and its location marked in pencil. The card was then removed and the track pinned to the baseboard, after which the card was cut along the pencilled track markings, which resulted in the necessary pieces of card cut to shape to fit around and between the track. We used card because it was readily available; thin plywood would serve equally well. In a quest for realism, we felt that the roadway should be made to represent cobblestones, and after some thought we covered the card roadway with Modelcraft 4mm. scale grey granite wall paper and gave it three coats of much diluted Indian ink. This permitted the pattern of the original design to show through, yet gave the whole a dull and weathered appearance. The roadway was tacked into position and the sunken track between the cobbles looks quite effective. The whole dock area has been fenced off from Port Trent station, Trent locomotive depot and Trent marshalling yard. Slater's plastic fencing posts were threaded with their monofilament nylon thread; the gates across the tracks were made up from balsa stripwood 2mm. square; the red warning discs were merely red counters from a table game glued into position; while the lamps were turned up specially from square brass. For dummy capstans along the dockside we used small studs from a new shirt and painted them dark brown.

At the same time the opportunity was taken to lower the track which had been the shunting neck and to extend it under Friars Hollow baseboard. The new track was made up from strip brass exactly as the dock track had been, but we utilized some old thick black-out material which could be bent to fill in between and around the track. Finally a thin smear of gum around the posts and along the farther end of this track was covered with Truscale imitation grass, which we were very lucky to have "in stores," since it is commercially produced in the United States. This was allowed to dry and the surplus green grass was removed with a vacuum cleaner. The general effect can be seen in the photographs.

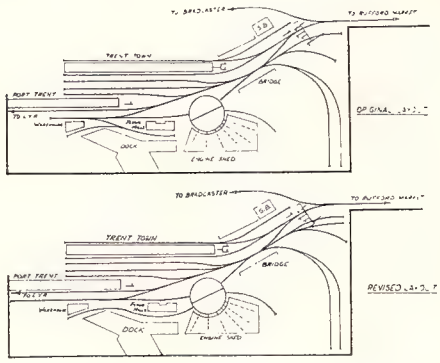
The revised track layout has meant a saving of two points over all, but in spite

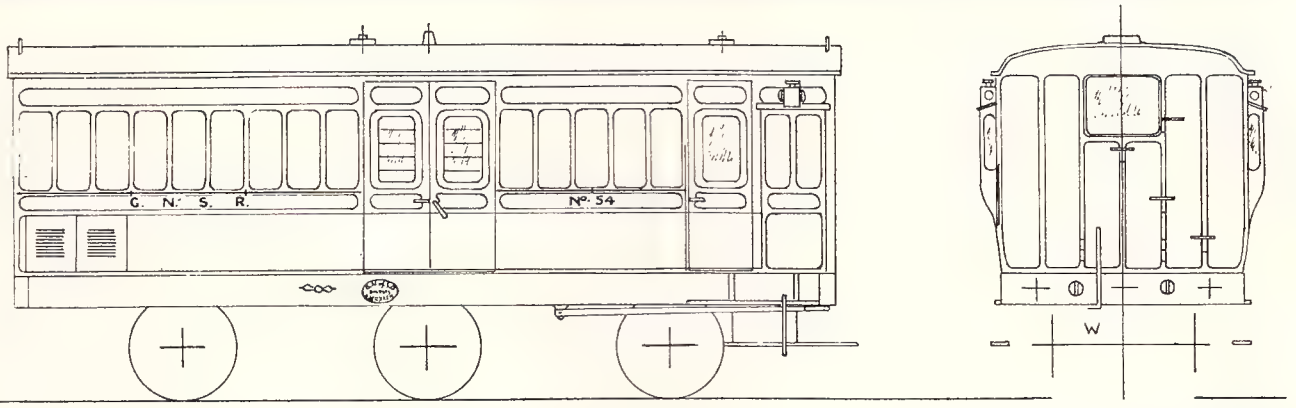


Trent docks. Note the sharp curve on the dock line circling the flour mills.

of this the yard is much easier to operate. Instead of having to keep the shunting neck clear of wagons, it can now be utilized for the temporary stabling of wagons which have arrived loaded and are awaiting remarshalling in a new train for their ultimate destination. It is not uncommon to have as many as eight wagons with transfer loads awaiting remarshalling at one time. This in turn has released one of the three marshalling tracks which previously had to be kept specially for such transfer wagons, so that we can now use all three of these tracks for marshalling and reception instead of only two. Trains of empty fish or oil wagons now arrive on one of these tracks and the shunting tank comes on at the rear, the train is hauled out on to the normal freight shunting neck and the wagons are propelled across the turntable to the dockside. The procedure is, of course, reversed for departing fish and oil trains.

Not only have the preparation and shunting of freights at Trent been made so much easier by this alteration to the docks, but the line has been improved scenically. Let no one be misled into thinking that this rearrangement was obvious and could have been carried out long ago. So many things are obvious when the solution is given! Actually it resulted from a tentative suggestion by one of the gang, which was considered generally and was elaborated by the joint thoughts of several members before arriving at the final scheme. So even after nine years of weekly operation of this layout the Sherwood Section has found that it can redesign its tracks to advantage!





EX-GREAT NORTH OF SCOTLAND RAILWAY

six-wheeled passenger brake van

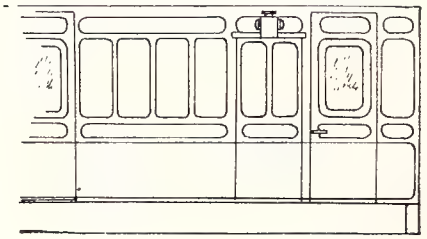
Drawing 4mm. scale, by J. A. N. Emslie.

Colours

G.N.S.R. : cream upper panels, purple lake lower panels, lettering gold.
L.N.E.R. : varnished teak.

Inset : alternative arrangement of duckets.

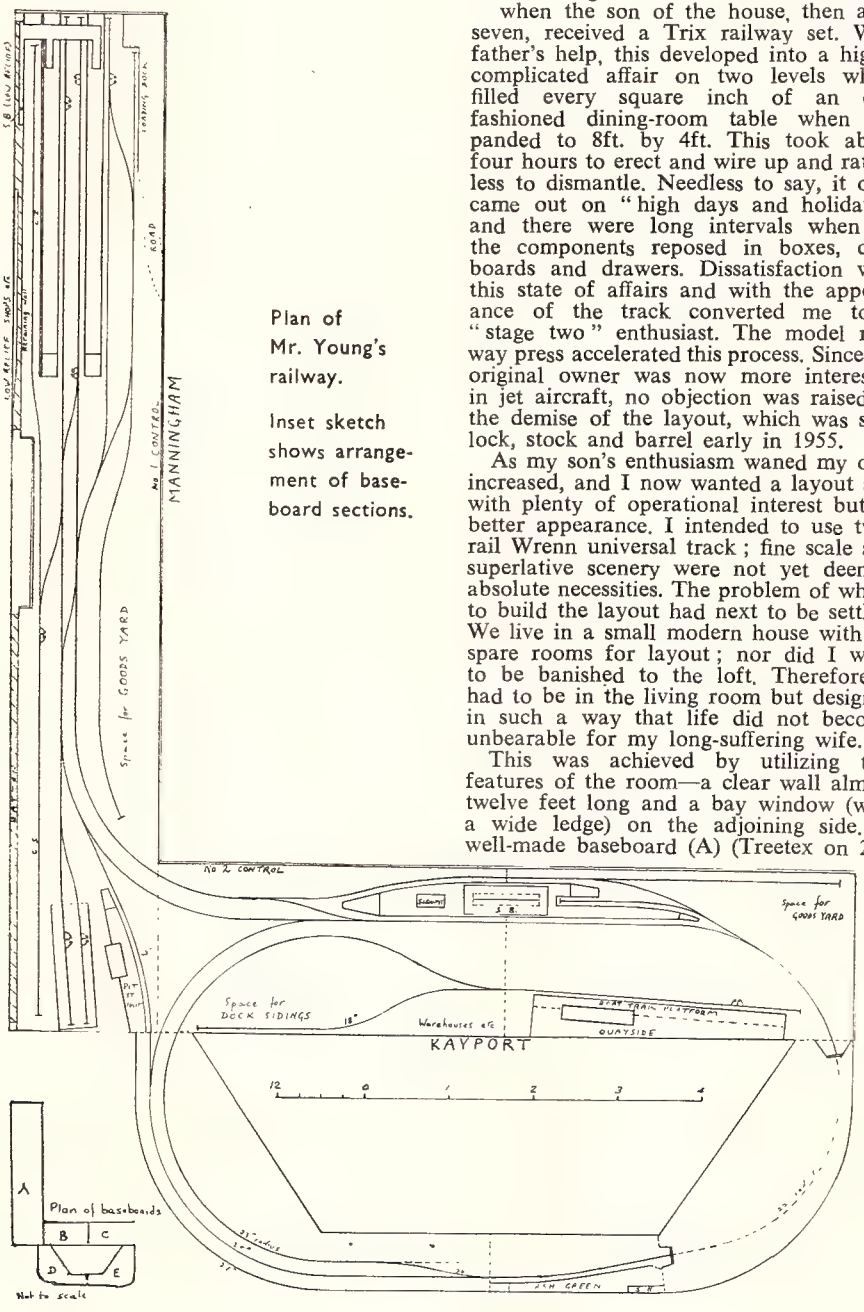
In all probability no G.N.S. six-wheel coach has ever been repainted in B.R. colours, except possibly as a departmental vehicle.



A RAILWAY IN THE LOUNGE

by F. C. Young

Photos by Philip J. Kelley



Plan of Mr. Young's railway.

Inset sketch shows arrangement of baseboard sections.

IN one sense we have had a layout in the living room since Christmas 1948, when the son of the house, then aged seven, received a Trix railway set. With father's help, this developed into a highly complicated affair on two levels which filled every square inch of an old-fashioned dining-room table when expanded to 8ft. by 4ft. This took about four hours to erect and wire up and rather less to dismantle. Needless to say, it only came out on "high days and holidays" and there were long intervals when all the components reposed in boxes, cupboards and drawers. Dissatisfaction with this state of affairs and with the appearance of the track converted me to a "stage two" enthusiast. The model railway press accelerated this process. Since the original owner was now more interested in jet aircraft, no objection was raised to the demise of the layout, which was sold lock, stock and barrel early in 1955.

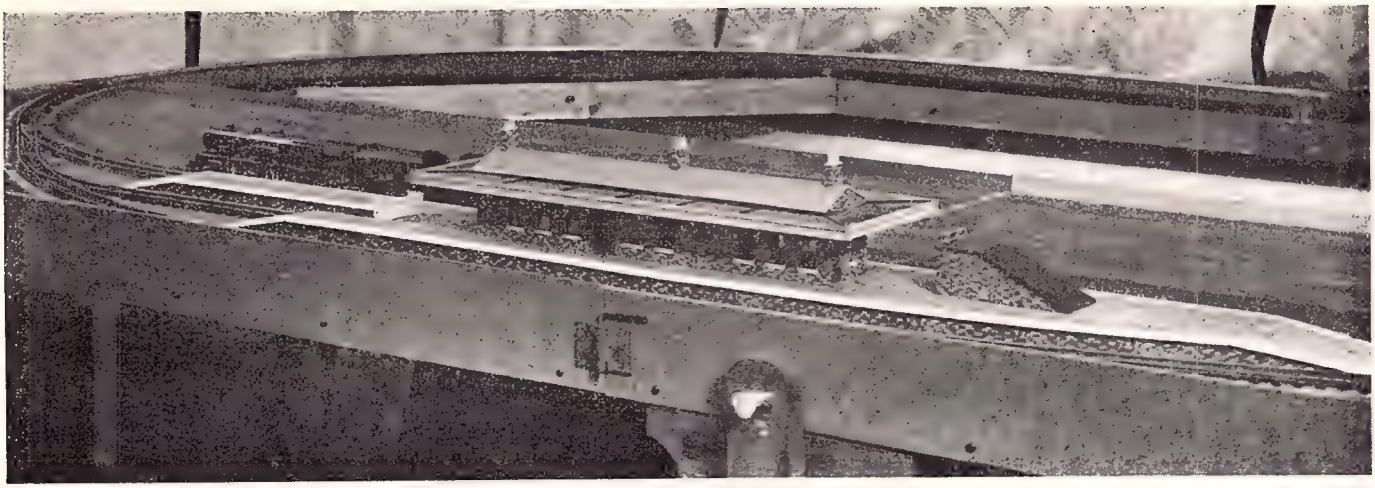
As my son's enthusiasm waned my own increased, and I now wanted a layout still with plenty of operational interest but of better appearance. I intended to use two-rail Wrenn universal track; fine scale and superlative scenery were not yet deemed absolute necessities. The problem of where to build the layout had next to be settled. We live in a small modern house with no spare rooms for layout; nor did I want to be banished to the loft. Therefore it had to be in the living room but designed in such a way that life did not become unbearable for my long-suffering wife.

This was achieved by utilizing two features of the room—a clear wall almost twelve feet long and a bay window (with a wide ledge) on the adjoining side. A well-made baseboard (A) (Treetex on 2in. by 1in. obechi frames and measuring 12ft. by 1ft. 8in.) was hinged to battens on the wall and when in use supported at the front by three detachable legs and the end of the window ledge. When not in use the "shelf" was simply raised against the wall, leaving a clearance of an inch or so, and secured by inconspicuous bolts. The underside is completely covered by curtains on spring rods, thus presenting a tolerable appearance in the raised position. On this baseboard is the main terminus (christened Manningham), with carriage sidings, goods yard, loco depot, control panel No. 1, and a double-track main line with a single-line branch leading towards the bay window.

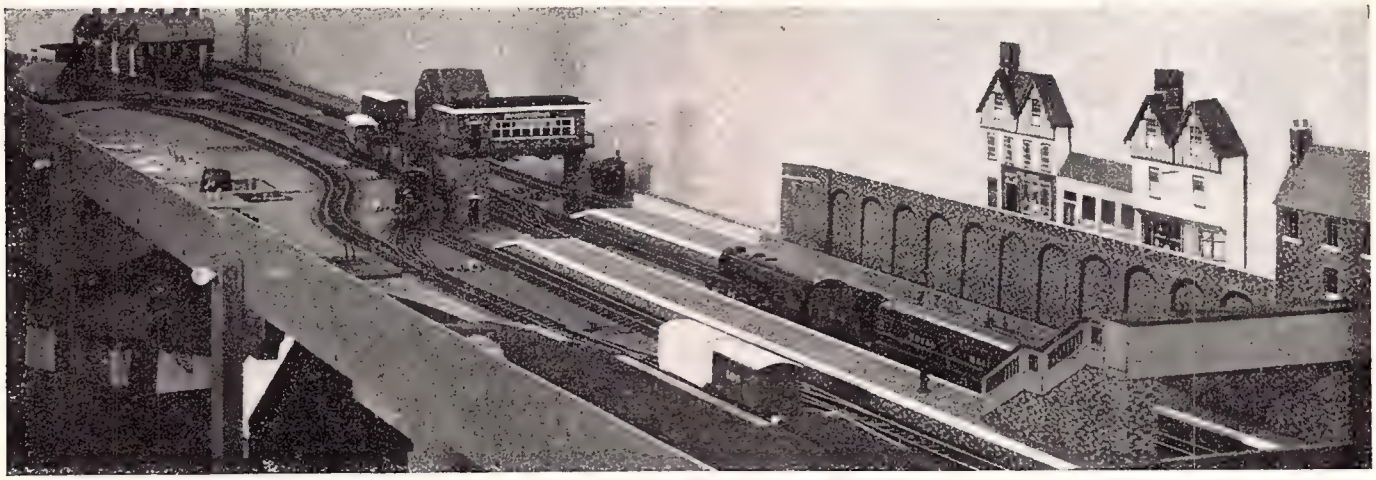
Two portable baseboards (B and C) of similar construction can be quickly joined at right angles to the main board (A), forming an "L" with a base 8ft. 3in. long across the front of the bay window, which is 8ft. 6in. wide. The double-track main line from Manningham sweeps round on to this board and reaches the main through station. This has a large island platform with a bay for the push-pull which will eventually work the single-line route to Manningham via the pit villages. The long up platform face is also used for down trains if necessary. A second panel is built in here ready for cab control, but the power unit is not yet bought. Current is carried between baseboards A and B by multi-pin plugs, but between the others by brass contacts on the baseboard edges.

This is the position reached after nine months of very enjoyable "work." The line to date is complete in itself and an intensive service between Manningham and the "junction" is in full operation, but with a very inadequate amount of rolling stock at present. Station buildings, loco sheds, signal cabins and rolling stock have to be removed and stored with the portable baseboards in a cupboard upstairs, but even so the time taken is a matter of minutes instead of hours and the room is soon back to normal.

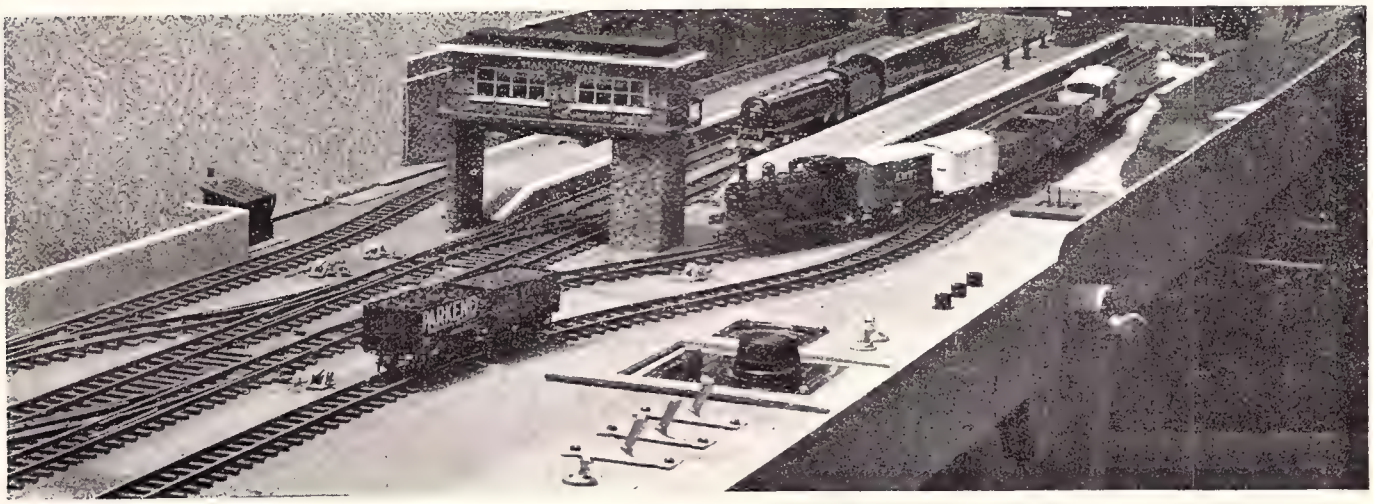
By the time this is published the baseboards D and E will be made. These will rest on the window ledge and work will have started on the continuous run and the return line to Manningham, forming a turning triangle for tender locos. The secondary main line to Kayport will follow. I freely admit that I have tried to include as many types of run as possible and the plan would not appeal to a purist, but the main purpose of this article is to describe how *one* layout has been built in a living room in order to encourage a few more "pipe-dreamers" to get cracking.

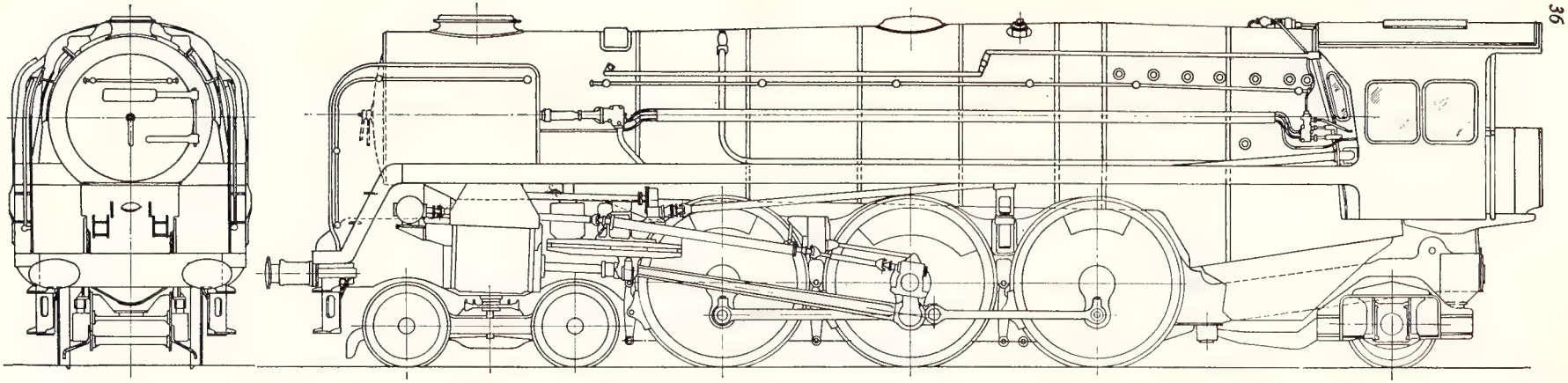


Kayport station. This low-angle photograph shows the extent of the loop section in the bay window. Note the hinge joining the two sections in the foreground. The removable pin enables the section to be easily dismantled.

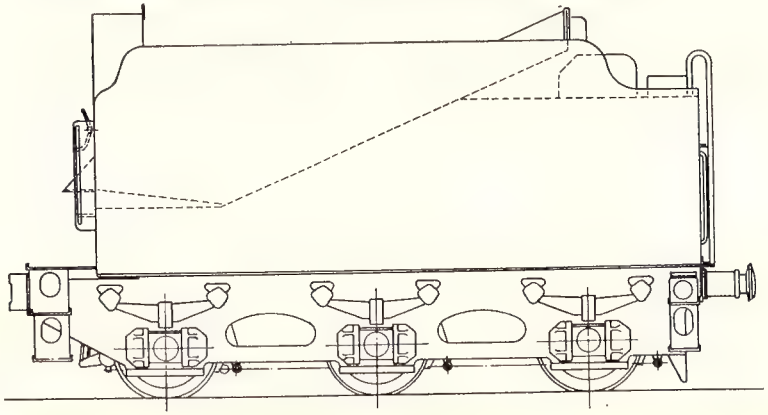


Two views of Manningham station. The upper picture shows clearly how a little judicious work with standard building papers can add an effective touch of realism to an otherwise plain baseboard. One Bilteezi sheet makes three low reliefs ! The lower photograph shows the control panel in detail.

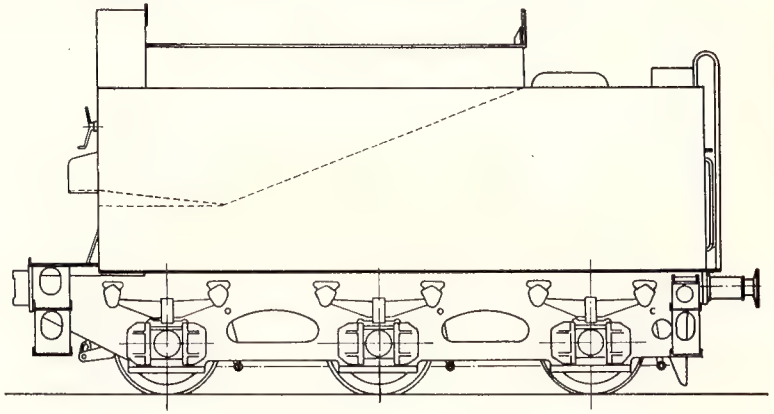


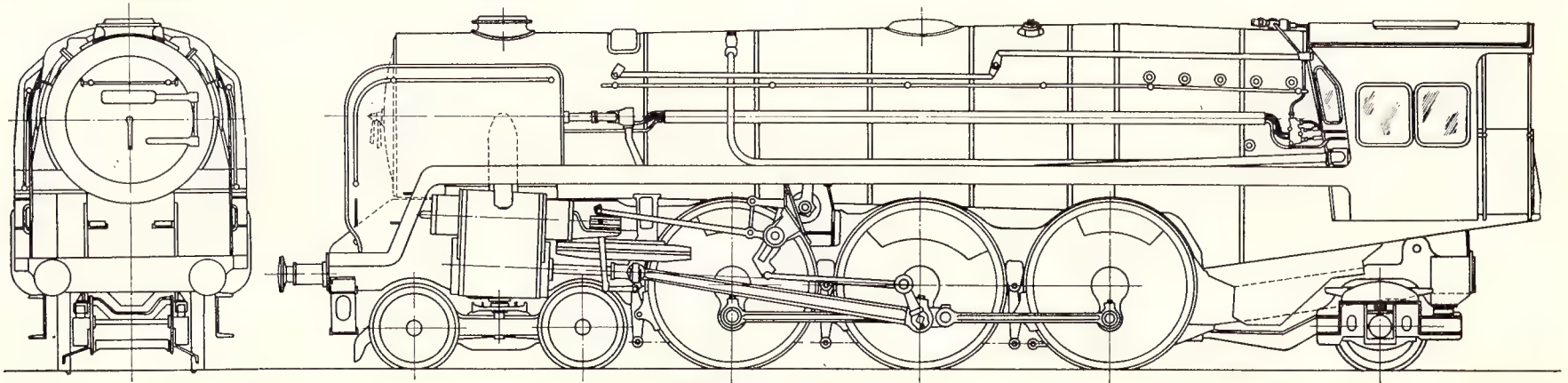


B.R. Class 8 4-6-2 " Duke of Gloucester "



B.R. Class 7 4-6-2 " Britannia " class





Drawings full-size 4mm. scale

Do It Yourself, No. 14

SOME DUBLO MODIFICATIONS

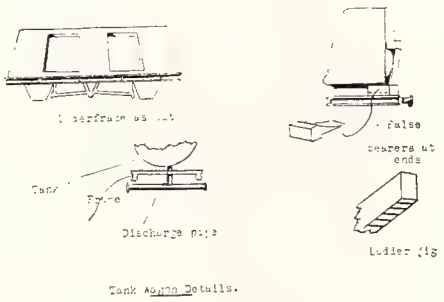
by R. K. Battson

I DO not pretend to know how many hundreds, or thousands, or maybe millions, of Hornby-Dublo wagons have been sold since this most excellent proprietary system made its first appearance just before the war, but there can be few "OO" layouts which have not accommodated some at one time or another. And, as is the case with most of the Dublo products, the borderline between the toy and the model is so narrow that only a very little work is needed on these vehicles to enable them to take their place without apology or excuse in the best of "OO" company.

Their first and most obvious need is some attention to the brake gear; and no one need fear to tackle this job, as the material is extremely strong and, at the same time, easy-working. Holes are first drilled with a $\frac{1}{16}$in. drill, five a side, one between the hanger vee, and two more between the hanger and the brake-blocks on each side. A centre pop is not really essential, but if desired one can be made by hand with a divider point. The work is then finished off with needle files of various sections—the triangular, the knife, and the flat parallel are the most useful—and the safety hangers and operating levers are cut from thin card, Durofixed in place. The narrow card strip can be greatly strengthened if it is first coated with Durofix on the inside and allowed to dry before painting.

Paint all the filed metal and the card stripwork with a good eggshell black, and the final result, as may be seen from the pictures, is rather encouraging.

The mineral wagon, which has a really excellent body, can be beautified by a suitable load of coal (not, of course, *real* coal; at its present price the value of the load would exceed that of the wagon), which is made simply by cutting a card strip the width of the interior, with turned-down ends a shade shorter than the depth, and Durofixing thereto some fine chicken grit, which when set is painted the same matt black. A few smears of dilute black and a patch or two of Indian red water-colour (applied neat it will take quite well on the metal) will give a slightly used and rusted appearance to the whole.



Tank Wagon Details.

The tank wagons are most suitable victims. The body of the Esso model is reasonably well coloured and lettered, but the others are rather unnaturally bright and should be repainted (yes, with that matt black again). Commence by turning up the metal tabs on the underside, when the whole body, complete with end bracings, can be lifted clear. Lifting four more tabs on the top deck will release the small spring-steel pieces which form the actual wheel bearings, so that one is left with the cast underframe only.

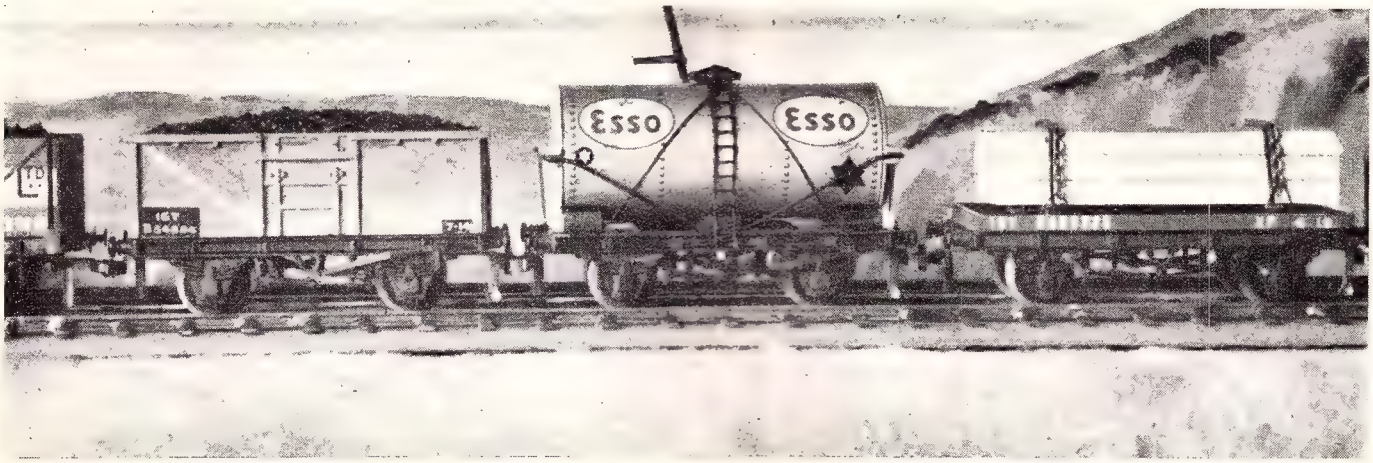
Two openings can now be cut in the floor by drilling and filing, just as with the brake gear. A cross bearer should be left the same width as the bearer on the body itself. This, of course, will not give quite the same effect as the prototype open framing, but one cannot go too near the headstocks because of the coupler rivets, and anyway the final effect is an enormous improvement on the original solid floor. The newly filed underframe should now be painted and allowed to dry while the tank proper is taken in hand.

If the tank is to be repainted, opportunity should be taken to add reinforcing bands of paper strip, punched with a divider point to represent rivet heads and glued in place. False wooden bearers shaped as shown in the sketch are set in place to hide the metal feet of the end-frame supports, and the whole is then tabbed back in place, with additional cross-bracing carried out in fine wire taken round the filler cap and nipped under the new beams.

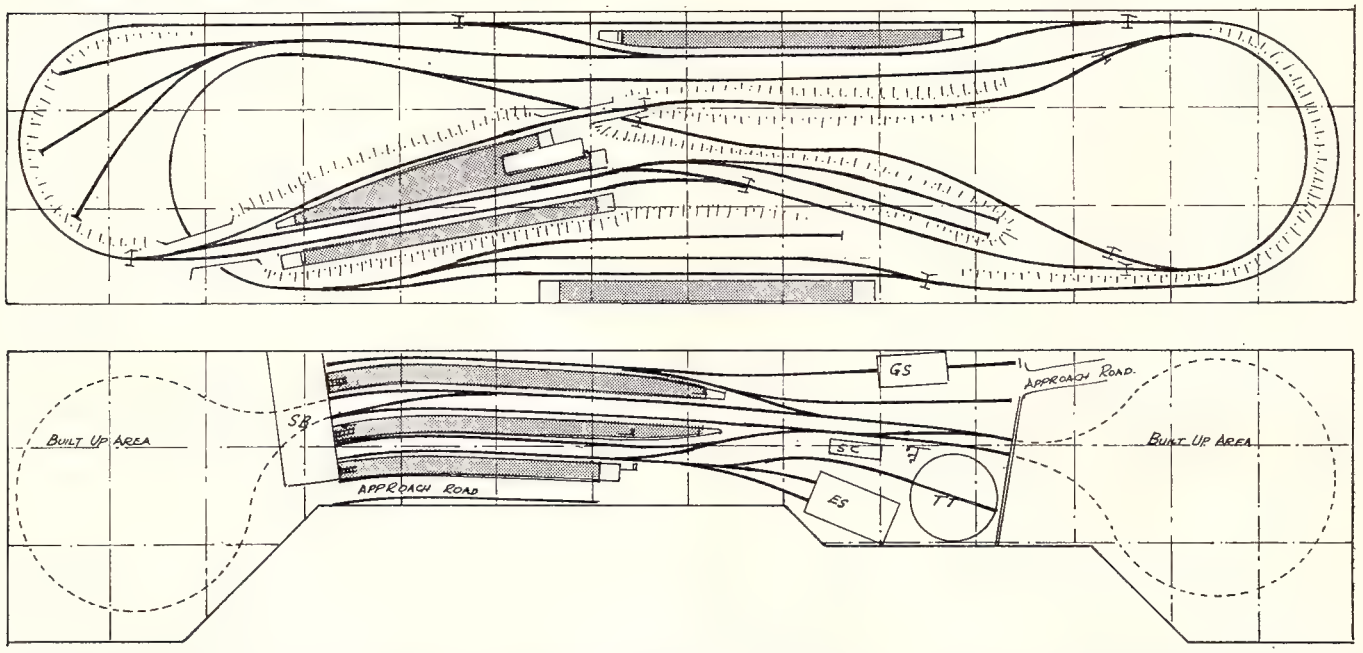
The T-shaped discharge pipes, made from fine dowel, are added as shown and, in the case of an all-black tank, suitable transfers applied. It should be noted that if the chosen transfers are of the water-slide variety they must first be trimmed as close to the letters as possible, or the gelatine support will make a shiny area distressingly noticeable against the matt background.

Access ladders, though maddening things to make (but you will find the method suitable for signal ladders as well), are very desirable. They are soldered up from fine wire, and, in order not to be driven entirely round the bend, some sort of jig is essential; so take a piece of stripwood a little less in thickness than the inside width of the ladder and file on its edge shallow transverse notches at the tread spacing. Cut the wire treads of equal length, and lay all which you have not dropped (about four per cent of the number cut in my experience) in these notches with a touch, this time, of Seccotine. When set, lay the whole issue face down, so that the treads are held securely, and run the iron down the previously tinned sidepiece so that it is just caught to the slightly projecting ends of the treads. Dip the whole affair in water to

(*Continued on page 40*)



Layouts for the Modeller



A space 14ft. x 3ft. for a "OO" layout is decidedly unusual—or so we thought until we received two inquiries for such schemes within a few weeks. At first sight the only possibility seems the conventional twin terminus line, but provided one is prepared to accept 15in.-radius curves the area has considerable possibilities on the scenic and operational side.

The upper plan is frankly for the modeller who has also to cater for his sons (and daughters), and provides a series of alternative routes which will tax the skill of a pair of operators and give plenty of fun. The lower plan is for the more experienced modeller who wishes to work a single main-line station according to prototype practice. The station is an outer suburban through terminus, with loco facilities and a small goods yard. The loops are hidden beneath a town landscape, which we suggest can be constructed on hardboard or ply panels to permit easy access to the tracks for cleaning and maintenance. With more space at one's disposal the loops could be extended and relief roads added to increase the flexibility of the timetable.

In "TT" gauge the area needed for each layout could be reduced to 10ft. 6in. x 2ft. 3in.

Scale for "OO" gauge: each square represents one foot square.

Scale for "TT" gauge: each square represents nine inches square.

BOOK REVIEWS

FAREWELL TO STEAM, by Roger Lloyd (Allen and Unwin, 12s. 6d.).

The steam locomotive is doomed to ultimate extinction. The fiat has gone out that henceforth our trains are to be hauled by diesels and electrics. To many this decision has been a bitter blow, for they consider that when the last steam-hauled train has run romance on the railway will be gone.

It is to be hoped that they will read this book, for Canon Lloyd, in wishing the steam locomotive farewell, is more than fair to its successors. More than this, he shows clearly how little of the real essence of railway fascination lies in the locomotive itself. Perhaps the essence of this book is best summed up in a paragraph in the first essay.

". . . and yet, oh dear, what is there going to be left to look at or to write about? More than at first sight we think. Here, for instance, are some notes of the last two railway adventures which came my way. The pleasure I found in them was real, but if these "days off" should be repeated in ten years' time, when the last steam engine will probably have departed for ever from the Southern Region, I don't believe I shall enjoy them any the less."

The book is wholly delightful, indeed the only people who may be disappointed are those who are misled by the title into expecting a sentimental wallow in days past. But they will benefit from the author's breadth and urbanity, and may come to realize that there is more to a railway than its locomotives.

A B C OF MODEL RAILWAYS, by K. N. Jeffries (Ian Allan, 2s. 6d.).

This popular-priced booklet sets out to cover the entire field of miniature railway construction and operation, and within the limitations set by the size of the publication does so admirably. As an introductory handbook it is excellent (indeed it will probably assist many fairly experienced modellers with their hobby), but inevitably there is much that has had to be left unsaid. This, however, has its advantages, as it not only keeps the price low, but avoids confusing the comparative beginner with too much detail. It certainly gives enough information to enable one to make a clear start.

"OO" GAUGE MINIATURE RAILWAY HANDBOOK (3rd Edition), by G. H. Lake (Percival Marshall, 2s. 6d.).

The third edition of this popular handbook is in essence a reprint of the information given in the second edition, but the trade reviews have been brought up to date. The full standards for "OO" gauge are given, together with much useful basic data concerning the scale.

GEM FLEXI-TRAK HANDBOOK (Gem. 1s.).

This small but concise handbook is designed to help the beginner to lay Gem Flexi-Trak successfully. Full instructions for curving the track are given, together with diagrams showing the correct way to wire several popular types of layout in two-rail. It is a particularly useful booklet which we can thoroughly recommend.

The Maltings—composite picture.

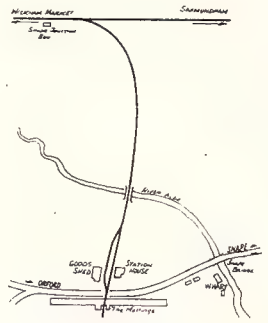
Prototype of the Month

THE SNAPE BRANCH

by A. G. Thomas

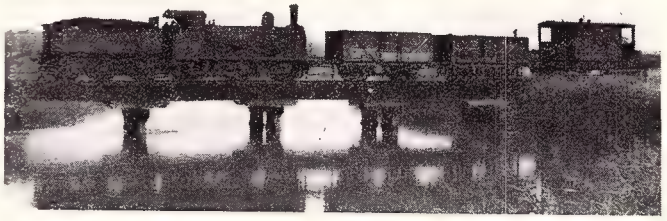
THE Snape branch leaves the former G.E. main line by way of a trailing point on the up line between Wickham Market and Saxmundham. It was opened on June 1, 1859, and consists of approximately 1½ miles of single track, ending in the Maltings at Snape, of which more later. There are meagre rail facilities at Snape. There is an ancient brick-built goods shed with a rather more modern office lean-to at the road end, while close by is the station house, occupied by the sole representative of British Railways. The Snape Maltings, owned by Messrs. S. Swannel and Sons, covers a large area of ground, and consists of a number of interesting buildings, mostly at right-angles to the main road, and having a magnificent brick frontage, with the previously mentioned arch and clock tower forming an imposing centre-piece. Beyond the archway the rail track continues for some distance through the works, and wagon turntables are used to direct wagons as required alongside various buildings which lie at right-angles to the main track.

At one end the Maltings border on the river, over which there is a picturesque bridge. There is an extensive wharf frontage, indicating that in times long past traffic was carried by water. A small building nearby, now used as offices, has the appearance of having once been a customs house.



Plan of the Snape branch.

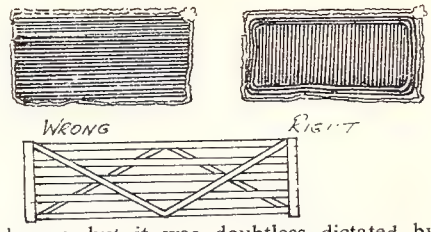
Top left: the Maltings from the river.
Top right: the timber bridge over the Alde.
Bottom: two views of Snape station building and goods shed.



Spotlight on Scenery

FARM FARE

by R. J. Raymond



ONE may wonder at first glance how some notes on the above subject can have any relationship to model railways ; but there is quite a connection, as I hope to demonstrate in due course.

The addition of a farmhouse and farm buildings to the range of scenic models on the market, as well as the availability of quite a useful range of tractors, implements, livestock, etc., has tempted many modellers to include a farm as part of their layout—and indeed there could be nothing more appropriate as a feature of the countryside.

Now agriculture has a set of rules quite as rigid as those which govern the running of a railway, and it seems a pity that a man who has observed the most minute detail on his railway should through lack of knowledge be any less accurate in his scenic setting.

I am going to base some of my remarks on the article by Mr. F. R. S. Rogers in the December 1956 issue of the RAILWAY MODELLER. There have been plenty of articles published in the past which would serve equally well, so I hope Mr. Rogers will not mind if I take his contribution as typical and not feel that he has in any way been "singled out."

One of the first things which spoils a model farm is a set of fields which are dead square or rectangular—it hardly ever happens in real life. Mr. Rogers, for instance, has a variety of irregular shapes, which is quite correct, but I have seen model farms where the fields appeared to have been drawn out with a ruler. And speaking of fields, remember one obvious thing—access to them. It is no use surrounding a model field with a continuous hedge. There must be a gate somewhere. If the field adjoins the road, then the gate should be at the side of the road. If the field adjoins another field you need a gate in the hedge between the two.

The five-barred farm gate is a common feature and quite easily modelled in cardboard or stripwood. It is not difficult to hinge, and one gate left open will add a little touch of realism. (It is a common failing of our town visitors to leave their trade mark in the form of an open gate, usually on the roadside after they have made a first-class mess as a result of their picnic.) Don't, however, if you want to avoid some caustic remarks from a visiting countryman, leave a gate open in a field where there are animals.

Now a primary rule on a farm is to prevent animals straying. The model cow obligingly stays where you place her on the layout, but how different in reality! We have one that will squeeze out of the smallest gap in the hedge or wriggle under any fence wire which has the slightest weakness. And to make matters worse she is virtually shockproof. While the electric fence will control the herd, our Dolly will scrape underneath apparently unperturbed by the voltage. You have only to see what someone's garden looks like after Dolly has spent a night in it to appreciate what I mean about animals straying.

Let us look at the lower picture on page 277. There is a beautiful gap in the hedge in the foreground, and everything is set for a replica of Stephenson's famous remark about it being "too bad for the coo." Believe me, those cows would be up the line before the farmer had time to turn round. Close it up, Mr. Rogers—not with a gate, unless there is a level crossing inserted, but by continuing the hedge.

Would any parson like a horse and one or two cows in his congregation? Because that is what is going to happen next if the railcar does not hit the cow first. Fencing should continue from where the hedge ends.

Most farmers have a car nowadays. How is this poor chap going to get in and out of his farm? I would suggest a gate and a farm crossing between the church and the end of the platform.

Don't lay a road across a field unless the road has a purpose. The one on the left of this picture just terminates in the hedge. It would be better to make a road from the proposed farm crossing down past the buildings and across the front of the house.

There is an intriguing gap between the farmhouse and the small building on the left. This should have a wicket gate, or otherwise, with the perversity of animals, the cows going into the yard will pass the pigs coming out.

Mr. Rogers has arranged his farm buildings well, i.e. surrounding the yard. Most farms have a concrete yard and I would suggest that he drops in a piece of not-too-clean white cardboard. If these yards are not concreted they become a perfect quagmire.

Animals need water, so a few drinking troughs add a nice touch.

The position of the church is not too happy, but it was doubtless dictated by space limitations. A footpath leading to the church door and fenced on the railway side might be an improvement.

From the railway point of view I think Mr. Rogers has produced a most interesting layout and one which must give him much pleasure.

Now just a few final words on model farms in general. Ricks are kept as near as possible to the farmyard to avoid too long a journey when feeding the livestock. Don't put a rick in a field in which there are loose animals, because they will pull it to pieces. If a rick *has* to be placed in such a field the farmer always puts a fence round it.

An old piece of corduroy makes quite a good impression of a ploughed field. The furrows in full-size practice are only five to nine inches deep, so don't use corrugated cardboard—it is too symmetrical and we don't usually plough so accurately, apart from the fact that the furrows are too deep.

I saw some time ago in the magazine a model ploughed field. It was spoilt by the fact that the furrows went from end to end of the field—right up to the hedges. It would be quite impossible to plough a field this way, as there would be no room to turn the plough. What we call a "headland" (about ten or twelve feet wide) is left round the field, and when we have finished ploughing the centre we finish off the headland. The sketches will make this clear.

Finally, don't mix up your "seasons." Haymaking precedes harvesting, so don't have a haymaking scene in one field and corn standing in sheaves in another. Keep your animals securely fenced in, see that your roads have a purpose and provide access to farmhouse and buildings. You can then welcome with confidence any countryman to see your layout, knowing that when his attention leaves the railway to examine the agricultural setting there will be no obvious flaws in the picture.

SOME DUBLO MODIFICATIONS

(*Continued from page 37*)

soften the glue (Seccotine being soluble in water, whereas Durofix is not), lift away, clean where necessary with a file, and fix in place on the tank with Durofix.

While the wheels are out of the frame (note that they *must* be replaced before the tank is tabbed back) opportunity should be taken to drill each one with three equidistant $\frac{5}{64}$in. holes, and to paint the centres and backs ; they will then look much less coarse.

And then there is the Weltrol yelling for attention ; but I really must shut up now, or the Editor will not give this article even a second chance.

A VETERAN RETURNS

Whether or not we believe "City of Truro" did exceed 100 miles per hour down Wellington Bank that summer's afternoon long ago does not matter. Because of Rous Martin's statement, the locomotive was preserved when Swindon ruthlessly scrapped the 6ft. 8in. 4-4-0s in the early 1930s.

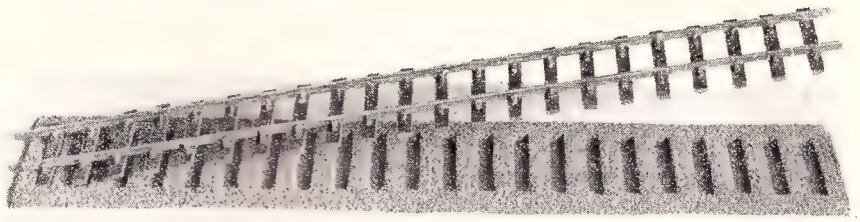
It seems certain that she was far from worn out at the time, for she is to be returned to limited service this year, most appropriately to haul enthusiasts' specials over the Western Region. This suggests to us that it might prove policy to save a few steam locomotives of historic value while they yet have some useful work in them, simply to run such trains (and draw useful revenue) when diesel and electric reign supreme.

Peco Topics

BULLHEAD TRACK

for "OO" and "EM" gauges

AS most readers will already know, the original Peco Bullhead Running Rail Chairs are no longer being manufactured, due to the very high costs of production, but it may not be so readily known that a most satisfactory form of Bullhead track can be made by using the metal slide pattern chairs, of which ample stocks are available to meet the needs of those who prefer this pattern track. Moreover, this type of track can be assembled in jigs away from the layout, and is equally suited to "OO" and "EM" gauges; indeed the realism may appeal to the more fastidious modeller who uses the latter gauge.



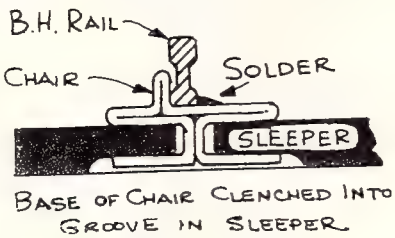
Section of soldered B.H. track shown lifted from the ballast unit jig.

The principle is simple: the chairs are fixed on the sleepers and the rails soldered to them. This is done in a simple jig, which consists of the appropriate Peco Ballast Underlay glued firmly to a piece of plywood or hardboard of convenient size. Except for points, the jigs can be any convenient length; generally speaking an 18in. jig will be most suitable, but there are advantages in using a 9in. jig, which produces a length of track very close to the scale 60ft. prototype length.

We will begin by describing the straightforward straight and curved track construction. First a quantity of sleepers (A2 for "OO" gauge or B2 for "EM" gauge) should be chaired, by passing the tangs of the chair through the hole in the sleeper, opening out the two tangs and flattening them down with a pair of pliers. Note that the upright projections of the chair should adjoin the outer end of the sleeper.

Next the paint on the inside of the chairs should be removed by a brisk rub with a small file. This is easiest done after the sleepers have been chaired but before they are inserted in the jig. (Note: these operations can easily be carried out anywhere, and can provide a profitable way of occupying the time spent travelling to and from work!)

When a good supply of sleepers has been chaired the assembly of the track can begin. Start by placing chaired sleepers in the jig slots, then smear each chair with flux. Then take one length of rail, smear the base with flux and place it in position. Hold it upright with a pair of pliers, and solder it to the chair on the inside only. Do not use too much solder; the object is not to make the usual blob, but rather to make a good joint. Leave a good clearance for the flange—if considerable care is taken this form of track will accept relatively coarse standard wheels as well as the finer B.R.M.S.B. type.



Detail: cross-section of chair and sleeper.

When the first rail has been laid, turn the jig round and, using a Rollogauge to ensure accuracy, solder the second rail in position in a similar fashion. When this is done the track can be removed from the jig, cleaned of surplus flux (and solder if need be), painted and set aside to dry. To lay it on the layout it is only necessary to glue down a ballast unit and insert the track, fishplating it to its neighbouring lines. Finally a few small pins can be used to secure it in position.

Points call for a little more care in laying out, but we assume that those readers wishing to use this form of track construction have already had some experience of the craft, gained by assembling the simpler spiked F.B. track, and therefore the instructions are compressed. First of all the $\frac{1}{16}$in. sleepering must be cut to length to fit into the jig made in the same way from the appropriate Peco Ballast Underlays. then marked out and drilled to take the rail chairs and frog fixing chairs, which are secured as for plain track.

Next solder in position the stock rails. joggled to take the point blades. Then build up the frog from rail (the new Mazak Peco frog cannot be soldered), soldering it to gauge, then add wing rails and point blades. Finally the check rails are soldered in position. The tiebar can easily be fitted after the point has been removed from the jig.

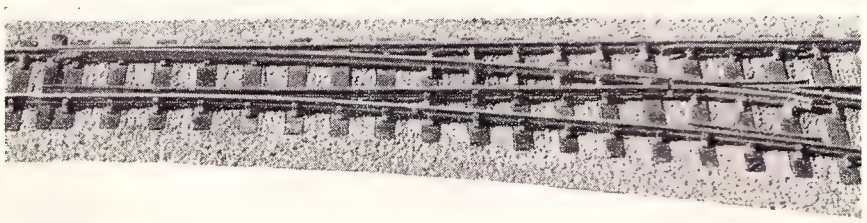
If metal chairs are used throughout, the point blades must be cut before they reach the frog for two-rail operation, and the frog energized through a separate change-over switch ganged to the tiebar, but alternatively the metal chairs for some seven sleepers away from the toe can be replaced by Peco fibre Slide Rail Chairs. cemented in position.

Other point formations can be constructed on similar lines. Indeed, this method is ideal for producing really complicated pointwork, as might be found at station throats. The best method of producing such pointwork is to begin by preparing a full-size drawing on a large sheet of paper, or several such sheets glued together. This can most readily be done by using gauge laths and templates, pencilling lines to gauge to give the position of the rails. When this drawing has been completed, it should of course be checked against the proposed site, then, if all is well, it can be pinned down to a large sheet of softboard. Standard ballast units can now be cut to suit the formation and glued to the paper.

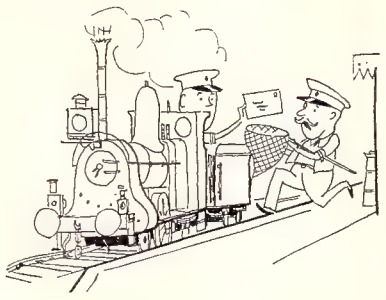
The sleepers are now cut, drilled and chaired, and when sufficient sleepers have been laid the rails are soldered in position

(Continued on page 48)

A finished point. Note the extremely neat appearance of the chairs.



READERS' LETTERS



A free-for-all forum of ideas and opinion.

BEDDGELERT

Perhaps some of the readers of the RAILWAY MODELLER could help me with a problem. I am building an 8mm. scale, 16mm. gauge, model of the North Wales Narrow Gauge Railway 0-6-4 tank loco "Beddgelert." I have all the necessary data and two photographs of it which appear to be works photographs, but it is impossible to tell with certainty whether the cab front spectacles are round or oblong. The loco, which was the only one of the three original N.W.N.G.R. locos built in 1877 which was not a single-ended Fairlie, was scrapped in 1906, so there is no hope of examining it.

This problem may sound trivial, but the anomaly of spectacles of the wrong shape would completely spoil the model, and to leave it without front spectacles would make it rather difficult for the imaginary driver to see where he was driving a train, and such an imaginary accident as might occur would be rather awkward on a garden railway.

Incidentally, on the subject of noise on railways, a friend of mine has built up his first kit (a Midland Railway bogie coach) and using standard "O" gauge hard plastic wheels in cast axle boxes, bogies normally compensated, the coach makes precisely the right noise, over rail-joints as well. The coach weighs about 2lb.

To anyone who says outdoor narrow-gauge railways "won't work" I would mention this: I have a test layout in 18mm. gauge, fifteen feet long, which goes through an earth cutting and over a viaduct two feet long and which is laid entirely on earth and sand (excepting the viaducts), on which I run two trains every day. This layout has been down for five weeks, with only slight reballasting six inches each side of the viaduct with earth after four weeks, the track consisting of 9ft. 3in. of nickel silver rail, and 5ft. 9in. of sheradized steel, which after two days was rusty at the joints, but this has still not spread. The loco is built on a German "mountain train," clockwork, the motor of which is rather erratic and punishes the track somewhat. The only derailments occur when the loco, which is very low, runs on to a small loose stone. Most of the trains are run on the "wild charge" principle, round 2ft. 3in. curves with sleepers at every two inches, which gives a very strenuous jerk to the track, but the track itself has not been touched. There has been no appreciable sideways drift of the track, even on the curves, although it is not held down in any way. There is one stub point, which was converted from an ordinary 16.5mm. gauge point in one and a half hours. This really is atrocious, but it is quite safe to run over it, despite the five-degree change of gradient in the middle. The vehicle I use most is built on a Peco Wonderful Wagon chassis with Nucro 18mm. gauge wheels, which only just revolve due to an accident on the second day's operation, when it came off the rails. The compensation of the wheels given by the chassis is very useful, especially over the point.

Southport. L. H. EMERY.

A 7MM. SCALE G.W.R. "DE GLEHN" COMPOUND ATLANTIC

This model locomotive was built by my friend Eric Halliwell, of Shipley, Yorkshire, whose layout was described and illustrated in the issue for March 1955. The locomotive is built entirely of brass, all joints being soldered. All the various detail parts have been either turned on the lathe or built up by Mr. Halliwell, the only purchased components being the wheels and axles and the cast brass axleguards on the tender.

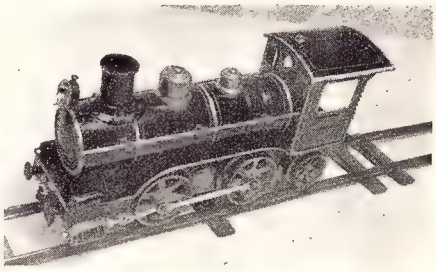
The locomotive is fitted with a standard "O" gauge Romford motor unit, which runs very smoothly and affords ample power for operating on Mr. Halliwell's layout. The model is furnished with a full set of cab fittings, also built up by Mr. Halliwell, and including firedoors which open and shut in orthodox manner by lever. Spectacle glasses are also fitted.

Mr. Halliwell entrusted to me the painting of the model, which has been carried out in conformity with the period the model represents, namely 1907, considerable care and research having been necessary in getting the correct painting details for the period.

I append, with the Editor's permission, two photographs of my own taking, showing the model from each side, these having been taken at the locomotive sheds on Mr. Halliwell's layout.

Ilkley. ALAN SHACKLETON.

AN INTERESTING OLD MODEL



The photograph above shows two views of an old model train now in the possession of Mrs. G. M. Briggs, of 24 Burns Crescent, Tonbridge, Kent. The clockwork locomotive, an 0-4-2, is made of brass, and the paintwork appears to be original, while the metal bogie coaches are replete with internal detail. The model is to the defunct "2" gauge, 2in. track gauge, and appears to us to be a collector's item. Mrs. Briggs intimates that she is prepared to sell the model to such a person.

NOISE

Regarding the subject of noise in the correspondence columns of the R.M., for the benefit of those interested I would like to point out that there are in fact records of railway sounds already on the market.

These are both 78 and L.-P. records and include a very great variety of recordings made both in the United Kingdom and abroad—"King" class, A3, "Merchant Navy" class, and Italian State Railways. Further particulars may be obtained by writing to Transacord Ltd., Bledlow Road, Princes Risborough, Aylesbury, Bucks.

Chadwell Heath. J. LAVERY.

"OO" IN THE GARDEN

For most people, I imagine, the main problem in the construction of a model railway, even in "OO" gauge, is one of available space, only the minority being fortunate enough to have a spare room or large shed in which a permanent system can be laid down.

For some time I had been gazing into shop windows at the excellent range of Tri-ang locos and rolling stock, and this year decided to take the plunge and build a model railway in a garden shed 15ft. x 8ft., with the object in view of expanding the line out into the open on a short experimental section. I had been informed that operating "OO" gauge in the open was not a success, but felt that it should be possible provided the track was satisfactory. First, on the open section, I laid some Peco nickel-silver rail on the ordinary Peco sleeper base, and some second-hand nickel-silver rail on Peco F.B. sleepers. These were laid on staging about 2ft. 6in. high and well coated with varnish. The big snag, of course, was rain, and it was noticed that the track needed cleaning after every shower before satisfactory running could be achieved.

I had visualized the possibility, with Tri-ang plastic locos and rolling stock, of operating trains in pouring rain. The first tests in rain, however, were highly unsatisfactory. The first two runs were normal, the third was erratic and finally it was impossible to operate at all. It seemed that the rain set up slight corrosion on the rail surface similar to that found on car battery terminals. Various ideas occurred for a rail-cleaning carriage to precede the locomotive, but were abandoned.

The project seemed to have reached a dead end when it occurred to my brother-in-law, who operates with me, that anti-corrosive jelly as applied to battery terminals might be the answer. This was duly acquired and lightly smeared on the locomotive wheels. The rain was pouring down outside when the first test train passed out of the shed on to the open track. Imagine our delight when we found it proceeded without any difficulty, and continued to operate indefinitely without any trouble at all. We found that the trains continued to run perfectly when the track had dried, and a light rub over about once a fortnight with the rail cleaner and an occasional application of the jelly to loco wheels is all that is required to maintain satisfactory operation in all weathers.

We have now laid two scale miles of track in the open, proving to the enthusiast with restricted space that the garden offers a real solution.

Nickel-silver can be laid on Peco F.B. sleepers spiked to the base, which should be of softwood. Peco sleeper base would also be satisfactory if fixed down with waterproof glue of the synthetic resin type. Staging can be cheaply erected with 2in. x 2in. hardwood posts driven into the ground with 4in. x ¾in. softwood as a base for double track, and with 1¾in. x ⅛in. hardboard as an edging wall. All should be well painted and the track given two coats of clear varnish, the top surface of the rails being cleaned off afterwards.

Perhaps manufacturers will think the experiment sufficiently interesting to want to cater for outdoor track, the main requirement being a non-expanding sleeper base, particularly for points and crossings. Fibre sleepers expand when wet and the gauge is held only by the pins being secured in the track base.

Any enthusiast living near who would like a demonstration will be welcome. It should not be difficult to lay on the rain.

Cheam. F. F. WHITE.

We shall be happy to forward letters addressed to Mr. White c/o the RAILWAY MODELLER. We would recommend hardwood sleepers (cut from commercial strip-wood) rather than fibre, as in our opinion the latter material is quite unsuited for outdoor use. EDITOR.
RAILWAY MODELLER.

CLUB SECRETARIES PLEASE NOTE

"Is there a local model railway club or engineering society in my district?" This is one of the most frequent questions asked at the inquiry desk at the Model Railway Club's annual exhibition during Easter week and at the club's stand at the trade show in the autumn. A lengthy list of clubs and societies has been compiled for use at these exhibitions from club notes published in the model railway press, but some clubs may be missing from the list because reports of their activities have not been published recently.

These inquiries for local clubs are made by visitors from all over the British Isles, and if clubs would like to be included in our "local directory" in time for the Easter exhibition a postcard giving the full title and address of the club and the name and address of the honorary secretary should be sent to me at the address below.

Press Officer, G. E. BIGMORE,
Model Railway Club,
15 Forestdale,
Southgate, London, N.14.

CLOCKWORK SURVEY

It will be remembered that early in 1956 I appealed to all your readers who were interested in spring-driven locos to write to me, giving their views on what was most needed in this much-neglected field. I promised to undertake a full survey of the replies received, to summarize them, to contact the trade and to make a full report on any results achieved. Letters poured in, not only from Great Britain, but from many other parts of the world. In the interim the Gauge "O" Guild was formed, and it was decided to make this inquiry an official activity of the guild.

We have now arrived at the stage where it is possible to make a full statement on the situation, based upon letters and on discussions with manufacturers and other experts. This report, however, is far too lengthy to publish in this correspondence column, and the guild is therefore adopting the following procedure. A copy of the report will be sent automatically to every member of the guild, but additional copies may be obtained by non-members if they will write to me at 8 Adelaide Road, Ipswich, Suffolk, enclosing a sixpenny postal order to cover the cost of postage and duplicating.

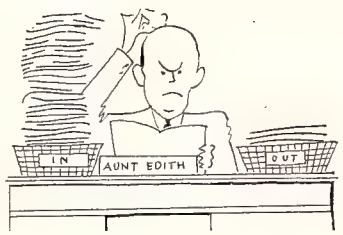
I am extremely pleased to be able to report that the guild has achieved a measure of success, and that the report contains full details of exactly what has been accomplished.

I take this opportunity of thanking the Editor for his co-operation in making so much space available to me in connection with this interesting survey.

JOHN L. RAY,
Joint President, Gauge "O" Guild.

ADVICE BUREAU

Queries should be addressed to the Peco Technical Advice Bureau, Pecoway, Station Road, Seaton, and should be accompanied by a s.a.e. and coupon on page x. We regret that we cannot prepare special designs for individual readers.



I should be glad to know if it is possible to run scale-length "OO" gauge passenger vehicles round 22-inch radius curves.

M.J.L., Kingston-upon-Thames.

First of all, there is no difficulty whatever about getting any length bogie coach round a sharp-radius curve, provided the couplings are fitted direct to the bogie. The difficulty arises in the inordinate overhang a long coach will give, but on a 22-inch radius coaches up to sixty scale feet in length can be used without too much trouble.

However, if you feel that a model of a modern long coach is going to look out of place on your line, and this is really the crux of the matter, we suggest that you model some of the stock from the 1890s to 1900s, which was only between fifty and fifty-five feet in length, and is therefore much more suited to layouts with sharp curves.

JUNIOR MODELLER

A FINE JUNIOR LAYOUT

GRAHAM TAYLOR became interested in railways at the age of six months, when he travelled from Hull to Withersea in 1950 on the North Eastern Region of British Railways.

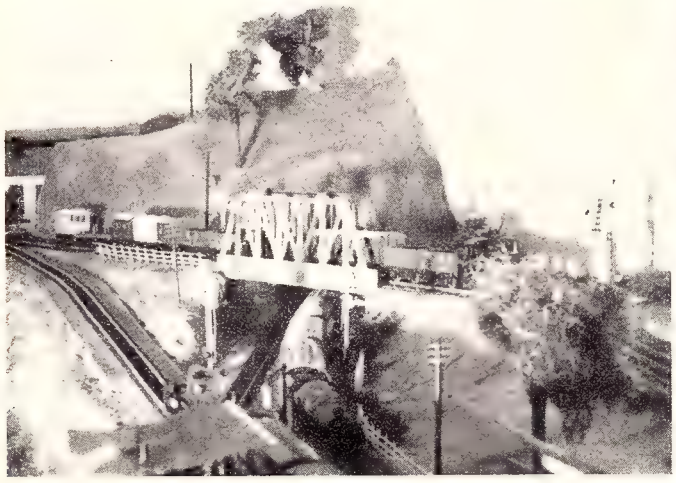
He became owner of his first model railway on his second birthday, October 1951, when he was given one of the first Rovex "Princess Elizabeth" train sets by his father (whose *only* motive was to introduce his son into a wonderful hobby).

He started loco-spotting before he could write or understand numbers—and, in fact, learned figures by this means. He began by pestering other boys into letting him copy from their note-books when the train had passed and the smoke had cleared. Thus he could count up to 90000—the "dub Ds" (more correctly the WDs)—before he had been taught the digits at school. His favourite locos, at present, are "streaks," and to date he has "copped" sixteen of the total. The Western Region "King" class are next, and of these he has collected nine. He has spotted on all regions of British Railways, though naturally most of his time is spent in the Hull section of the North Eastern Region, and he is now one of the first to shout "Scrap it!" It is the opinion of his father that he can remember the number or name of every locomotive that he has seen—certainly among the named classes anyway.

His model railway is situated in an old N.E.R. carriage, which is happily placed (without wheels) at the bottom of his grandfather's garden, and runs round three sides of an 18ft. 9in. section of it. The present system represents a section of main-line double track with reverse loops at either end (hidden by tunnels) so that up trains become down trains a few moments later. Branching from this and via a flyover junction the line reaches a small high-level terminus. The track consists of GEM Hi-track for the main line and flyover and the terminus is in Tri-ang, but future work will be done in fine scale, as neither make of turn-out has proved really satisfactory. It is sectionalized for cab control (there are two cabs), and there are seven sets of home-constructed colour light signals.

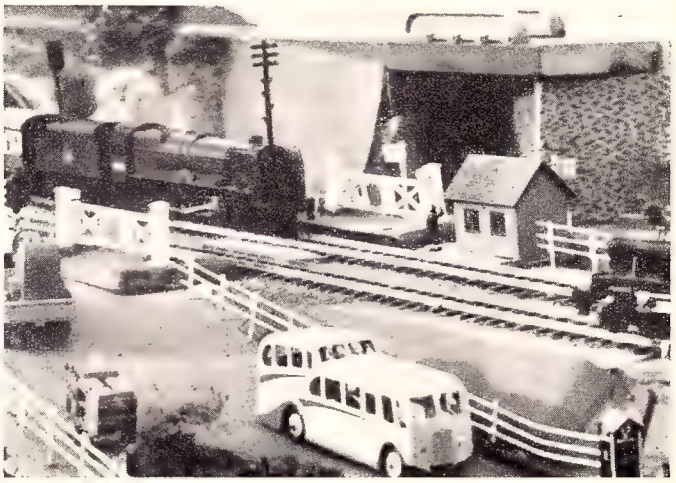
The loco stud is completely Tri-ang, as is all the rolling stock. There are two "Princess" locos (in green and black—the latter one being five years old and re-motored), two 3F tanks, one 2-6-2 tank, one saddle tank, and one diesel shunter. The assistant chief mechanical engineer heartily endorses the remarks of the RAILWAY MODELLER with regard to the new Tri-ang motor, and the green "Princess"

The flyover.



Above : heading—Graham Taylor at the controls.

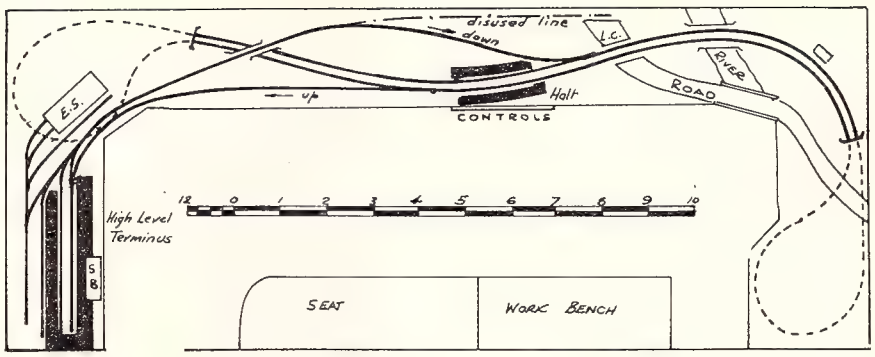
The level crossing.



and the 2-6-2 tank (which are the two locos weighted up to 11b.) both pull nine coaches with ease, although six or at the most seven are the more general rule.

The scenic work has been done in plaster and pots of paint by the assistant chief mechanical engineer. There is also a full range of Master Models placed in position by the chief mechanical engineer. Extension of the present system has been scheduled to be ready by Christmas. This work will increase the handling capacity of the terminus, which will have 7ft.-long platforms and a turntable and remotely operated points, so the assistant chief mechanical engineer has some major constructional work to do before then.

In his spare time the chief mechanical engineer (who is now seven) goes to school, plays cowboys and fighting, goes to Cubs and spots trains and ships. He is a keen stamp collector and now has well over 1,000. His favourite one is the 1840 penny black.

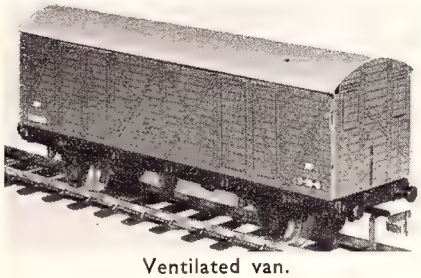


In his spare time the assistant chief mechanical engineer is an electronic engineer.

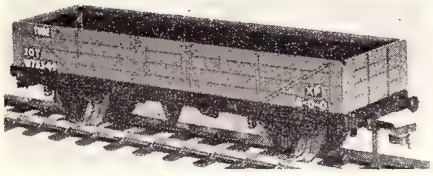
HORNBY-DUBLO LONG-WHEELBASE WAGONS

A WELCOME introduction in the Hornby-Doublo range of vehicles are the three long-wheelbase vehicles illustrated below. The ventilated van and tube wagon are modelled on Western Region prototypes and the double bolster appears to be a standard B.R. wagon.

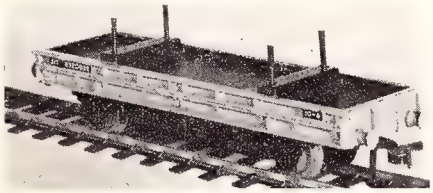
These unusual vehicles, which despite their considerable length still negotiate the sharp curves of standard Hornby track, will doubtless soon find their way on to many readers' layouts. Needless to say, the construction is fully up to Hornby-Dublo standards. We look forward to further developments on these lines.



Ventilated van.



Tube wagon.



Double bolster wagon.

Vehicles and their uses

MILK VANS AND TANKS

IN most cases any special-purpose vehicle bears a strong family likeness to its original version, which may well first have been built in the early days of railways. The big exception to this is the milk van. Originally milk was carried from the farm to the consumer in churns—indeed, it is less than thirty years since the milkman and his churn was a familiar sight—and milk was poured from a foaming measure into the purchaser's own jug. Today milk is taken from the cow in spotless dairies, processed in modern factories, taken by rail in glass-lined tanks, which are scrupulously cleaned before they are filled, to the bottling depot, where the milk is put into the bottles and sealed without any chance of contact with the atmosphere. The whole process is completely hygienic, and from our point of view much more spectacular than the old-fashioned method whereby the churns were simply trundled into special vans and dealt with in a bay platform.

However, the old methods of transport are still in use, though the milk tank is rapidly ousting the older van on all but the smallest of branches. Either type of vehicle is to be found in complete trains or marshalled in passenger trains, for milk has always been dispatched at high speed.

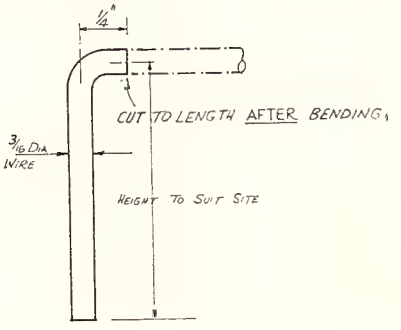
Milk tanks, of course, demand special sidings with elaborate piping, but the earlier van can be dealt with at any platform. The main requirements apart from this are a number of churns, which can be obtained without difficulty from your dealer.

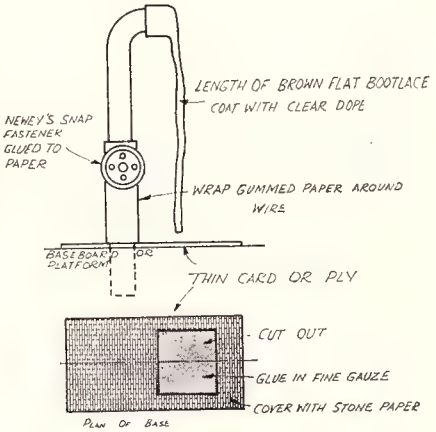
CORRECTION

We regret that the thickness of the mounting card recommended in last month's article was incorrectly given as 7/32in. It should have been 3/64in.

BUILD A SOUTHERN REGION WATER-CRANE

(L.S.W.R. pattern)




LENGTH OF BROWN FLAT BOOTLACE
COAT WITH CLEAR DOPE
NEWEY'S SNAP FASTENER GLUED TO PAPER
WRAP GUMMED PAPER AROUND WIRE
BASE BOARD OR PLATFORM
THIN CARD OR PLY
CUT OUT
GLUE IN FINE GAUZE
COVER WITH STONE PAPER
PLAN OF BASE

The illustration (full size for "OO" gauge) shows how a simple water-crane of the distinctive L.S.W.R. pattern can be built up from wire, card and a few oddments from the button-box. No dimension is critical; the height can be varied within limits, according to the location of the crane (i.e. on or off the platform).

Personality Parade, No. 62

M. G. Foster

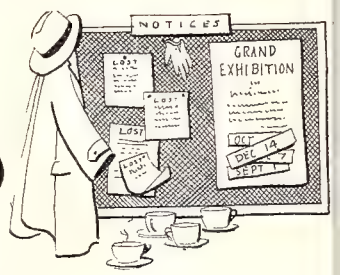
Michael G. Foster, A.M.I.E.E., chairman of the Croydon Model Railway Society and a member of the Model Railway Club, is a firm supporter of the Great Western Railway, with the Southern in second place. He is married, has two children and is a churchwarden of Christ Church, Purley.

He was introduced to model railways when, in 1917, he was presented with an "O" gauge clockwork "American Flyer." From this he progressed through Bassett-Lowke, Leeds and models of his own building until, at the end of 1927, a family move reduced the available railway space from 16ft. x 20ft. to 6ft. 6in. x 7ft. 6in.! After several abortive attempts to get some "O" gauge running in this confined space, active modelling more or less ceased until, in 1932, a very simple "OO" gauge layout was started.

Marriage in 1938, among other blessings, brought larger rooms and railway modelling reasserted itself, although the change back to "O" gauge fine scale was, for various reasons, delayed till 1948.

The "Westcester and Abbotsbridge Division" is jointly operated by the G.W.R. and S.R. and some details of it have appeared in the model press. It is 12-volt D.C. two-rail and represents part of the county of "Wessex" a few miles to the east of Exeter. The G.W.R. meets the S.R. near the county town and city of Westcester.

CLUB NOTICE BOARD



NOTES AND NEWS

Model Railway Club

Talks at club meetings normally begin at 8 p.m. and last an hour, with a short period for questions afterwards. With very few exceptions talks are illustrated with photographs shown on a large screen by the epidiascope.

On track nights, models or parts of models are displayed on static stands, while the "O" and "OO' tracks are fully engaged testing locomotives and vehicles of all sorts. The locomotives are mainly electrically driven, but sometimes a live steamer has the right of way, and on February 2 it is hoped to see another of Norman Eagles's spring-driven engines showing its paces.

Inquiries to the hon. secretary, Mr. D. A. Boreham, 10b Ealing Road, Northolt, Middlesex.

Croydon Model Railway Society

Once again the C.M.R.S. is holding an exhibition at Christ Church Memorial Hall, Brighton Road, Purley, which is almost opposite the old Purley tram depot. The show will open at 11 a.m. on Saturday, March 2, and will close at 8 p.m.

The society's new portable "OO" layout will appear before the public for the first time, and with its length of some fifty feet should provide plenty of action. Other layouts will be operating, together with a display of static models in various gauges from neighbouring model railway clubs. Representative exhibits are also expected from the Talyllyn and British Railways. The stewards will be pleased to meet fellow modellers, who are reminded that there is more room in the early evening.

Society meetings are held every Wednesday in the clubroom, No. 1 Platform, Purley Oaks station. Inquiries should be made to the hon. secretary, Mr. J. F. Tonkyn, 195 Mitchley Avenue, Purley, Surrey.

The Gauge "1" Model Railway Association

Preparations are now being put in hand for the association's display at the Model Railway Club Exhibition at Central Hall, Westminster, next Easter. The running track will occupy the same site as last year, and will be the same interlocked layout, operated by bell code. It is expected, however, that a number of new items of rolling stock will be in service, supplementing the proved veterans of previous exhibitions. The static stand will display a further selection of members' models, especially steam locomotives.

The association exists to promote co-operation between Gauge "1" modellers, and to further the gauge in all its aspects. All those interested are invited to contact the hon. secretary, Mr. J. T. van Riemsdijk, at 40 Bancroft Avenue, London, N.2, for further particulars.

West Lancashire "O" Gauge Group

The above society has recently been formed with the object of fostering interest in that part of the country in the practical side of "O" gauge modelling and operation.

A working layout, combining two-rail and stud-contact systems, suitable for fine and coarse scale wheel dimensions, is in an advanced state of building at the group's temporary workshops. Practical "O" gauge modellers in this area who are interested are invited to get in touch with the hon. secretary of the group, Mr. G. F. Atherton, "Malaysia," Bold Lane, Aughton, near Ormskirk.

Norbury Transport and Model Railway Club

The club has arranged for the British Transport Commission film unit to visit it on Wednesday, February 20, at the clubroom for a showing of a selection of transport films. Anyone interested in seeing this film show is cordially invited to come along. The clubroom is situated at St. Stephen's Hall, Winterbourne Road, Thornton Heath, Surrey, and the film show will start at 7.15 p.m. The hon. secretary is Mr. L. D. Bradley, 19 Stuart Road, Thornton Heath, Surrey.

Epsom and Ewell Model Railway Club

This club meets on the second Thursday in each month at Pit House, Ewell, Surrey, and is always ready to welcome visitors. It caters mainly for "OO," "O" and "S" gauges. The annual subscription is 10/-. Hon. secretary, Mr. L. C. Krailing, 74 Weston Park, Weston Green, Thames Ditton, Surrey.

South London Model Railroaders

The above club has been formed to cater for those interested in American-type model railroads. Meetings are held fortnightly in the West Wickham, Kent, area. For full information contact the secretary, Mr. P. J. Watkins, 17 Bennetts Way, Shirley, Croydon, Surrey.

FEBRUARY MEETINGS

Bournemouth Model Railway Society
1—J. Beeson will answer questions arising from his lecture on January 4.
15—"Coach construction." Mr. H. J. Joslin.

Edinburgh and Lothians Miniature Railway Club
19—Lantern slides of trains, etc. Mr. D. A. Kelso.

Fylde Model Railway Society
5—Low-relief modelling. Mr. S. Hall.
19—Open night.

Historical Model Railway Society
4—"Leek and Manifold Valley Light Railway." Dr. J. R. Hollick.

Hull Miniature Railway Society
7—Ten-minute talks.
14—Track night.
21—Operation night. Members' own rolling stock.
28—Track night.

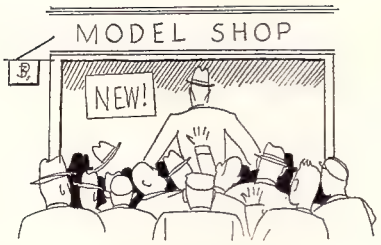
Model Railway Club
7—Talk, "Railway oddities." Mr. G. Hatherhill. At Caxton Hall.
21—Track night (L.M.S.). At Hammersmith.
28—Talk, "The Carlisle and Settle Railway." Mr. N. Wilkinson. At Caxton Hall.

Nottingham Model Railway Club
5—Film show by British Railways.

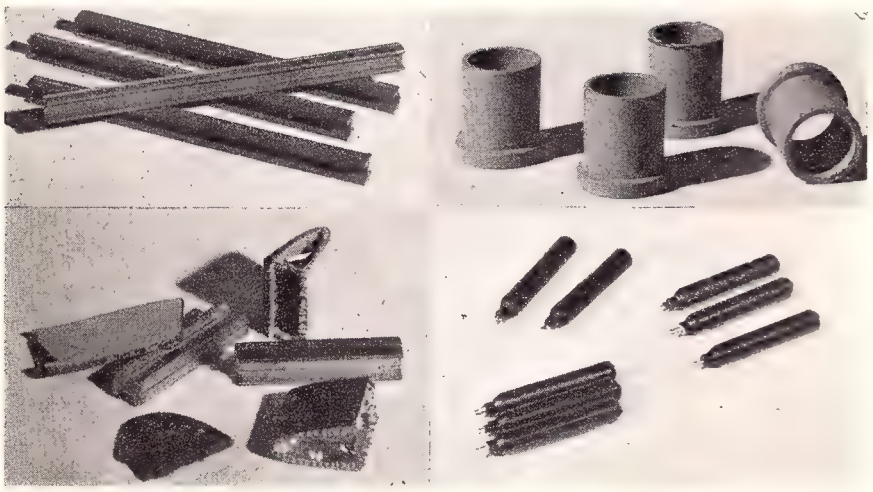
Thames Valley Model Railway Club
15—A talk on signalling a simple line.

Wimbledon Model Railway Club
13—"Automatic and colour light signalling." Mr. J. T. Howard-Turner.
27—Rummage sale.

TRADE WINDOW



A REVIEW OF NEW ITEMS SUBMITTED FOR OUR INSPECTION BY MEMBERS OF THE TRADE



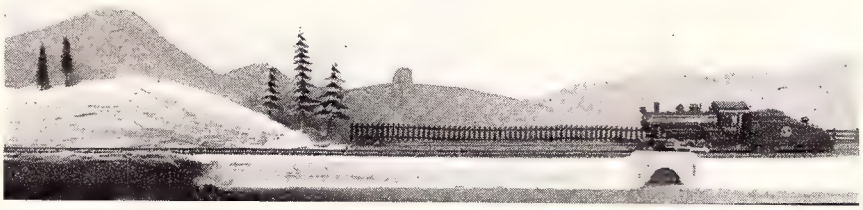
"OO" LOADS

S & B PRODUCTIONS

3 Orton Buildings, London, S.E.25

Girders, oxygen and acetylene cylinders, concrete pipes, 2/- set ; aircraft salvage, 2/6 set

Realistic loads for open wagons, and to spread about the goods yard, are essential items to give life to the railway. The five loads by S and B Productions illustrated above are all useful adjuncts which, with a little ingenuity and artistry, will go far to improving the appearance of any railway. The girders and cylinders are ideal loads for flat trucks, while the scrap and pipes fit nicely into open wagons of any vintage. A few oxygen and acetylene cylinders should, needless to say, be found near any engineering workshop, whose yard could possibly be nicely littered with the scrap and girders. There is no limit to the application of these loads.



BEATIPLAST

SOUTHGATE HOBBYSHOP

1 The Broadway, Southgate

Six-yard roll, 2/9

A new material for the scenic modeller is Beatiplast, a 3in.-wide plastic-impregnated bandage which when wetted can be moulded into any desired contour before it sets firm and hard. It is thus an ideal material for use wherever large expanses of embankment, cutting or rolling countryside are needed, and is particularly useful for open-top and portable layouts, where a lightweight, strong and resilient material is required, one capable of bridging fairly large gaps without intermediate support.

The illustration above shows that it is possible to mould comparatively fine detail in Beatiplast, the small culvert being an excellent example. Alternatively, additional items such as small rock outcrops can be added with the usual plaster filler.

HOBBY TOPICS

This is being written at the turn of the year, with the post-Christmas rush still in progress. We have done our best to help everyone, and do apologize to those who have suffered through postal and other delays. We will be back to normal and quick service before this leaves the printer.

BEATITRAK

We are delighted with the first results from our new venture. Particularly pleasing are the satisfactory comments of those who have laid Beatitrak. It is truly robust, it looks realistic, it is universal and it is cheap. Who could ask for more ? Heavy scale standard track like Beatitrak and Wrenn satisfies the majority, but we are still ready for those who want fine scale ; our stocks of Peco, Nucro and Gem are extensive.

THE BEATIGAUGE

This is a simple tool for marking out curves of given radii. It has many uses, but the modeller will find it invaluable for both planning and track laying. The first gauge covers 13½in., 15in., 18in., 24in. and 36in. radii and it is as easy to use as a ruler. Price **3/6**, post **6d.**

BEATI-BRAND PRODUCTS

We have now a series of useful items which we list under this general heading. Some are new, all are popular.

Loading gauge 9d., **with base** 1/-.
Station lamp **6d.**, dozen **5/-**.
Yard lamps—single **9d.**, dozen **7/6** ; double **1/-**, dozen **10/6.**
Telegraph poles—single **6d.**, dozen 5/- ; double **9d.**, dozen **7/6.**
12in. fencing, white, **1/-** foot, dozen **10/6.**
Water tank, oblong, with hose, **4/11.**
Tunnel mouth, in catalin, single **3/11** pair, double **4/11** pair.
Plate bridge fronts, single **3/6** pair, double **4/6** pair.
Beatiwire in 12ft. coils, **1/6** (five colours).
Beatiscrews for Tri-ang, gross **2/-**, Dublo gross **2/-.**
Beatipins, ⅜in., packet **9d.**
Beatiplast, per roll **2/9.**
Beatiglass, per sheet **1/9.**
Beatiply, 1/16in. or 3/32in., square foot **1/9.**
Model maker's knife, **1/6** ; spare blades, three for **1/-.**
Real granite chips, packet **6d.**
Beaticontrol tubing, per foot **9d.** ; wire, **3d.**
U-H-U universal glue, tube **1/6.**

All post extra—see page ii.

STOP PRESS
Beatibulbs, 12-14v., **9d.** each.
Beatilamp, for yard or station, to take above.
Prices on application.

SOUTHGATE HOBBYSHOP
1 THE BROADWAY
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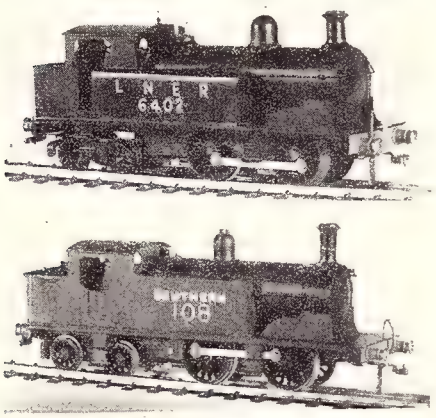
This is a particularly useful and economical addition to the range of items for the scenic modeller.



"OO" GAUGE 0-4-4 TANKS

EAMES

34 Tudor Road, Reading

Prices from £9, according to finish

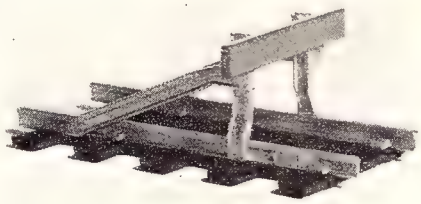
Although there are several useful proprietary tank locomotives on the market at very modest prices, many enthusiasts desire something off the beaten track, yet do not wish to pay the large sum required for a special-order model.

Eames of Reading have recently introduced a range of hand-made standard models, of which we illustrate two items, an ex-L.S.W.R. M7 and an ex-N.E.R. G3. Neither model is an absolutely exact replica of its prototype, as the basis of the chassis is the Tri-ang 0-6-0, while the smokebox is a standard casting. Nevertheless the models look right, and so, according to the long-established drawing-office dogma, are right!

As these models are hand made in batches the prices are reasonable, but it is possible for the purchaser to have any of a number of optional finishes, while the wheels and pick-up arrangements can be varied to suit any chosen standard. Furthermore, we understand that Messrs. Eames are proposing to add to the range, so if you have a particular favourite you would like to have on your layout they will be happy to consider it.

An 0-4-4 is a tricky locomotive to build, as the weight distribution must be exact if the model is to haul anything like a load. We were pleased to find that in this respect both these models were outstanding, each being capable of hauling with ease a twenty-three-wagon goods train on level track, and taking some fifteen wagons up a one-in-twenty grade.

The general finish is good, the models being cleanly spray painted and lettered with transfers. Altogether they represent excellent value for money, the M7 being the answer to the all-too-common complaint regarding the absence of Southern locomotives.



"OO" BUFFER STOP

G. & R. WRENN

Honywood Road, Basildon, Essex

2/6

The attractive diecast buffer stop illustrated above is a small but invaluable part of the Wrenn range of track. It is robustly made and will certainly stand up to its duties efficiently. It is not insulated and cannot be joined directly to two-rail track.

MANTUA LOCOMOTIVE AND CAR KITS

Distributed by the

PRITCHARD PATENT PRODUCT CO. LTD.

Pecoway, Seaton, Devon

The Beatiplast illustration on the preceding page also shows one of the Mantua "Big Six" locomotives made from the complete kits recently imported by Peco. These loco and wagon kits have proved extremely popular and at the time of writing very few examples remain available. Interested enthusiasts should write to Peco for a free list.

As an example of prices we quote the "Big Six" 0-6-0, loco and tender, £9 12s.; 0-4-0 shifter, loco and tender, £8 8s.; 0-4-0T booster tank, £6; all kits being absolutely complete with motors, to run on 12-volt D.C. two-rail, scale or universal. Box cars are available from £1 10s., gondolas are £1 1s. All kits are of excellent quality and offer an opportunity for the British modeller to acquire American products.

PAFRA CEMENT

CELESTOR MFG. CO.

Dartmouth Road, Forest Hill, S.E.23

6d. per tube

Pafra is a cement which is particularly useful to the railway modeller, as it is extremely tenacious. Its adhesive powers are considerable and, as is well known, it will securely fasten small details to metal, and is thus recommended for assembling the well-known wagon kits, which, being cast from low-melting-point alloy, cannot easily be soldered.

This would be advantage enough, but in addition Pafra is extremelv thin and free running; thus it is very simple to make a neat joint, a particularly tricky matter with minute details where the merest dab suffices. Moreover, as Pafra is so thin, any unavoidable surplus dries as a stain, which is covered by the subsequent coats of paint. This is a cement no modeller should be without—indeed it is advisable to carry a good stock at all times.

RECEIVED FOR REVIEW

The undermentioned products have been received for review at the time of going to press. Full details and illustrations will appear as soon as possible.

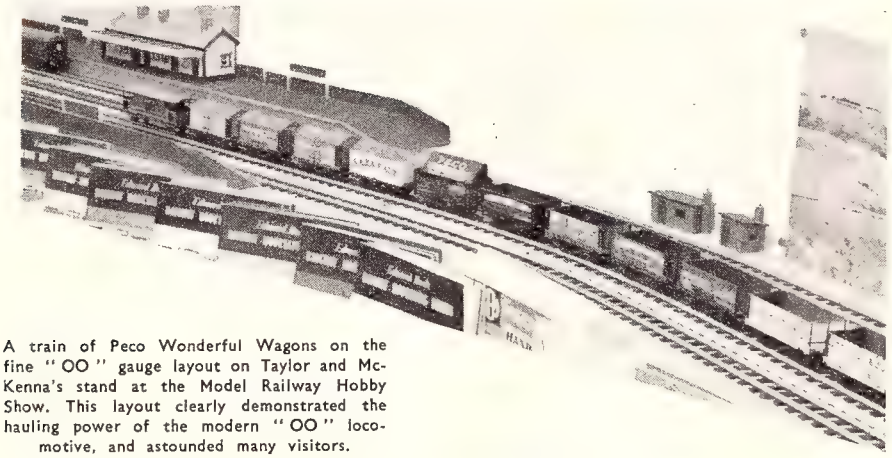
Viking cars (Bradshaw Model Products), Viking figures (Bradshaw Model Products), Roskopf figures (Bradshaw Model Products), walls and tunnel mouths (Edward Exley Ltd.).

BULLHEAD TRACK

Continued from page 41

as described above. The whole unit can then be laid in position on the layout. It is, of course, impossible to give the method of assembly in detail, as each formation really represents a problem in itself; for this reason we do not advise anyone to begin by constructing something complicated, such as, say, a scissors crossover incorporating double slips, but to serve a short apprenticeship on simpler formations such as turnouts and diamonds before attempting track arrangements which all experienced modellers agree require some degree of familiarity with point construction.

As this type of track is completely integral, and makes no use of the baseboard, it can, if so desired, be laid on any type of baseboard surface. We would, however, still recommend softboard, for the sound-deadening qualities of this material are invaluable, while the fact that the track can be securely held by a few pins pushed in with a pair of pliers not only speeds the actual laying—a job which all modellers like to carry out with speed and dispatch—but makes it possible for the track to be lifted and relaid with little or no chance of accidental damage.



A train of Peco Wonderful Wagons on the fine "OO" gauge layout on Taylor and McKenna's stand at the Model Railway Hobby Show. This layout clearly demonstrated the hauling power of the modern "OO" locomotive, and astounded many visitors.

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New Zealand modellers contact S. Nixon, 26 Elizabeth Street, Wellington, C.4, N.Z. Agents throughout the world.

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FOR SALE, Hornby-Dublo engine and tender, carriages, track, points, controller, transformer, buildings, etc., £20. Apply N. Shilling, 85 Wellfield Road, London, S.W.16.

ELECTRICAL radio bargains. Clearance sale. Good stock, give-away prices. S.a.e. R.V.R., 33 Uplands Road, Woodford Bridge, Essex.

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HORNBY-DUBLO trains, accessories for sale. S.a.e. 117 Church Street, Milnthorpe, Westmorland.

FOR SALE. "OO" gauge, two-rail model railway equipment, including locos, rolling stock, etc. Details, R. W. Johnson, 94 Topsham Road, London, S.W.17.

ALMOST new "OO" layout. Over 70 feet flexible track, crossovers, points, two Farish engines, coaches, trucks, sectionalized baseboard 10ft. x 6ft., three controllers, split-potential power unit; layout not completely wired up, but all parts complete, mostly new. Cost £50, accept £25. Currie, 9 Glenville Road, Padstow, Cornwall.

WANTED

DUBLO required, anything considered. Details, price, etc., Denny, 82 Arkwright Street, Nottingham.

"HO" GAUGE coaches by Reidpath, etc., L.M.S. particularly preferred, but any company considered. Details, price to Box 57/1.

SEA-FRONT site available for an attractive, lively "OO" gauge model railway exhibition. Layout should be approximately 28ft. x 10ft. Exhibition to run approximately ten weeks this summer. Further information from Esplanade Cafe Ltd., Promenade, Bridlington, East Yorks.

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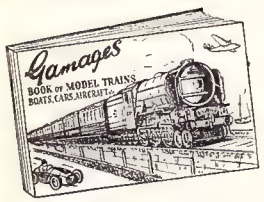

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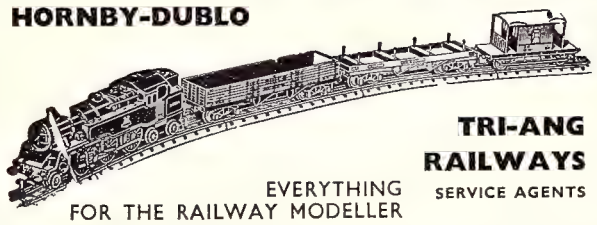

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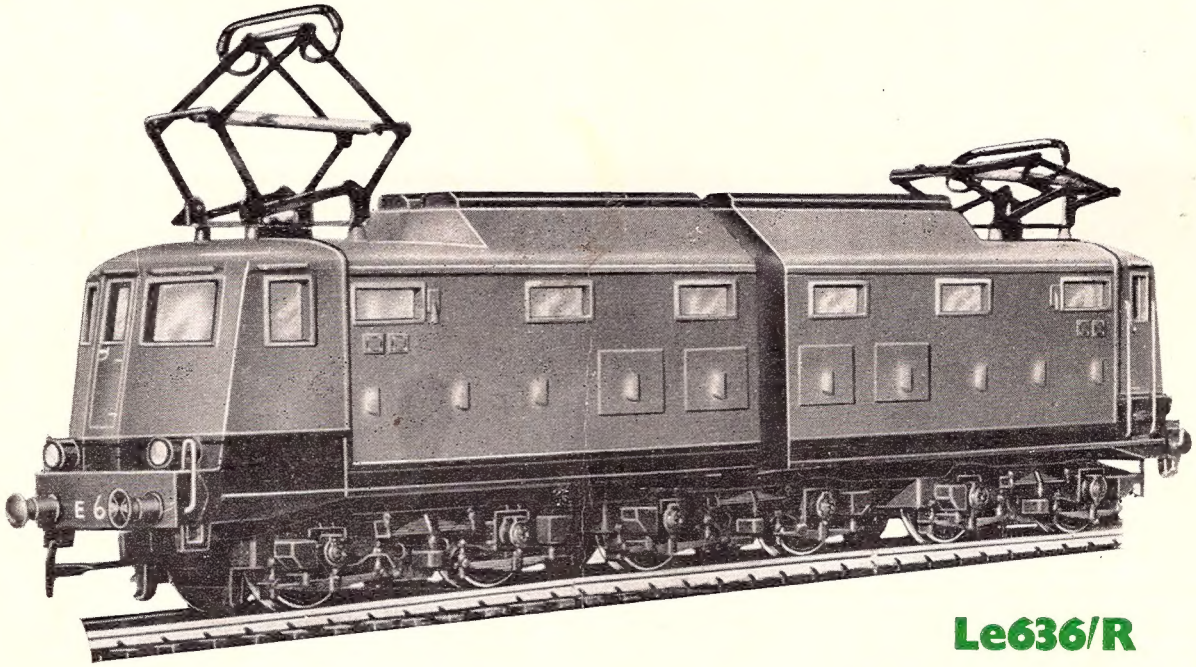

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